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TEST BOOKLET

C

CSAT APTITUDE TEST– (4293) – 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

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

Due to the unconventional manufacturing of IoT devices and the vast amount of data they handle, there's a constant threat of cyber-attacks. Several high-profile incidents where a common IoT device was used to infiltrate and attack the larger network have drawn attention to the need for IoT security. The ever-looming possibility of vulnerabilities, data breaches and other risks associated with IoT device usage underscores the urgent need for strong IoT security. IoT security is vital for enterprises, as it includes a wide range of techniques, strategies, protocols, and actions that aim to mitigate the increasing IoT vulnerabilities of modern businesses. For those deploying IoT systems, hardware security and authentication are critical measures.

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

1. Unsecured IoT devices could have economic implications.
2. One of the ways to secure IoT devices is to enhance their data-handling capacities.

Which of the above assumptions is/are valid?

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

2. Which one of the following statements **best reflects the most critical inference** that can be made from the passage given above?

- (a) In light of cyber-attacks, IoT manufacturing and security cannot be taken lightly.
- (b) India is not yet fully ready to adopt IoTs, given the imminent security challenges.
- (c) While the IoT is the future, it is unsafe.
- (d) Implementation of IoT is not easy.

Passage – 2

Colonialism has never been only about the relentless exploitation of resources for economic gain. Enmeshed in the project to rob and dominate through violence and force was the project to transform the knowledge and governability of the territories called "colonies" and allegedly "civilize" their populations. When Big Tech and their social divisions deploy datafication to do social good, here, too, economic, and moral ideals feed each other but differently. For, helping vulnerable people (something unobjectionable) becomes itself a site of exploitation. Such harms are an intrinsic part of how these companies operate, a natural consequence of rationality at heart. A colonial rationality now applied within both Global North and Global South that underlies their business model. As such, no ethical guidelines can ensure that social good will truly be realized through such projects of datafication.

3. Which of the following is **most definitively implied** by the above passage?

- (a) India should be careful to protect its digital sovereignty against the growing big tech companies.
- (b) In the context of the history of colonization, only the form has changed, not the nature.
- (c) Big Tech uses big data for data colonization of the global south.
- (d) Big Tech companies collect data of the people to help them.

Passage – 3

The last 30 years of liberalisation have changed the face of the Indian economy. From unending shortages and subpar quality in telephones, scooters, cars, ration and pretty much everything, India has come a long way because of liberalisation. The time is now ripe for the education sector to be liberalized as well. The success of democracy in India depends upon the education of its citizens. Modern education is to an extent a process of learning from real life and the pulsating, dynamic society around us. So, the learning should be at the choice and pace of the learner. So, educational opportunities are to be provided to individuals to fully develop their personalities. Truly speaking despite all attempts in the direction of equality of opportunity, the result is not satisfactory. Hence to accelerate in the progress of providing it, incentive measures are to be properly implemented and the administrative structure must be properly streamlined with a strong will and determination.

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

1. The theoretical education that happens inside the four walls of classrooms cannot be called modern education.
2. The present education system in India has failed to a certain extent to provide egalitarian education.

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. Two inlet pipes can fill a tank in 200 and 240 minutes respectively and a leak empties it at a rate of 3 litres per minute. Two pipes working together can fill the leaky tank in 150 minutes. What is the capacity of the tank?

- (a) 1000 litre
- (b) 600 litre
- (c) 450 litre
- (d) 1200 litre

6. For children's day, Anuj decided to distribute some electronic items (24 laptops, 72 tablets and 60 smartphones) among 'n' schools to promote digital education. He wants to distribute them in such a way that each school gets the same number of electronic items. Also, the number of laptops, the number of tablets and the number of smartphones that each school gets is also the same. What is the smallest possible figure for the total number of electronic items that each school would get?

- (a) 14
- (b) 12
- (c) 8
- (d) None of these

7. A group of students appeared for the exam. Each of them attempted 45 questions and each of them obtained different marks. If none of the students scored negative marks, how many students may have appeared for the exam?

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

8. Upon observing the water shortage in the village, the Gram Pradhan, Babu Bhaiya, constructed a water tank capable of holding enough water for the entire village for 50 days. It was filled till the brim. However, a sudden discovery was made that there was a leak at the bottom of the tank, resulting in the drainage of 20,000 liters of water daily. Due to this leak, the water supply lasted only 40 days for the entire village. If Ramvilas, a local iron-smith of the village, would have partially plugged the leak the very first day, allowing only 5,000 liters of water to be drained per day, on which day had the tank got emptied?
- (a) 42th day
(b) 44th day
(c) 48th day
(d) Can't be determined
9. Consider the following information and the Question and the Statements that follow.
Animesh bought some pencil and pens. A pen costs Rs. 7 and a pencil costs Rs. 5.
Question: Did he buy equal number of pens and pencils?
Statement-1: Animesh paid a total of Rs. 65 for the pens and the pencils he bought.
Statement-2: Had he bought 4 pens more and 3 pencils more, he would have paid a total of Rs. 108.
Which one of the following is correct in respect of the above Question and Statements?
- (a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.
(b) The Question can be answered by using either Statement alone.
(c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.
(d) The Question cannot be answered even by using both the Statements together.
10. There are n ways of going from Aligarh to Balia, $(n + 3)$ ways of going from Balia to Patna and $(n + 8)$ ways of going from Patna to Ranchi. If the number of ways of going from Aligarh to Ranchi (via Balia and Patna) is 336, then find the number of ways of going from Aligarh to Patna (via Balia).
- (a) 28
(b) 38
(c) 48
(d) 58
11. Average income of Atul for the first 9 months is Rs. 10000 per month, and that for the last 3 months is Rs. 20000 per month. Which one of the following is necessarily true regarding Atul's average income per month for the entire year?
- (a) It is between Rs. 15000 and Rs. 20000
(b) It is exactly Rs. 16000
(c) It is more than Rs. 15000 but less than Rs. 17000
(d) None of these
12. Two boys, who study in a school, start walking to their homes from their school at 1 pm. The first boy, whose home is 5 km away from the school walks at a speed of 5 km/hr and the second boy whose home is 8 km away from the school walks at a speed of 6 km/hr. If their homes are in directly opposite directions, what will be the distance between the two boys at 2:10 pm?
- (a) 12 km
(b) 12.8 km
(c) 11 km.
(d) 10 km.

13. At the end of 2021, two supermarket chains - A and B had the same number of customers. In 2022, the supermarket chain 'A' gained 20% of the existing customers from its competitor 'B'. However, 'A' also lost 10% of its existing customers to 'B'. Over the period from 2021 to 2022, the combined customer base of these two supermarkets increased by 40%. In 2022, the customer base of 'A' constituted 50% of the total customers for the two competitors. What percentage of the new customers in 2022 chose to patronize 'B'?
- (a) 42.5%
 - (b) 52.5%
 - (c) 62.5%
 - (d) 72.5%

Direction for the following 3 (three) items:

Read the information given below and answer the items that follow.

Five boxes A, B, C, D and F are placed one above the other, but not necessarily in the same order. Each box contains different food items viz. Noodles, Namkeen, Jalebi, Khakhra and Burger, but not necessarily in the same order.

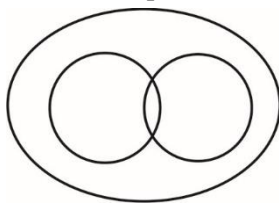
Box F is placed two boxes above the box that contains Khakhra (i.e. there is one box between them), but is not placed at the topmost position. Box F neither contains Noodles, nor is placed adjacent to the box that contains Noodles. Box B is placed below the box that contains Noodles, but not just below it. The number of boxes placed above box B is the same as the number of boxes placed below box C. Box C does not contain Noodles. The box that contains Burger is placed above the box that contains Namkeen, but not just above it.

14. Which box contains Noodles?
- (a) Box A
 - (b) Box D
 - (c) Box C
 - (d) Cannot be determined.
15. How many boxes are there above the box that contains Jalebi?
- (a) Two
 - (b) Three
 - (c) None
 - (d) Cannot be determined.
16. Pick the odd one out?
- (a) Namkeen, A
 - (b) Jalebi, D
 - (c) Khakhra, C
 - (d) Burger, C
17. Six friends Pankaj, Kiran, Ramesh, Suresh, Tina and Uday go to a party. Ramesh, Kiran and Tina are wearing black, while others are wearing white. Suresh and Uday are wearing new clothes, while others wear old clothes. Ramesh, Pankaj and Suresh go with gifts, while others have not taken any gift. Who are the two people, who have not taken any gift and are wearing black?
- (a) Kiran and Tina
 - (b) Ramesh and Tina
 - (c) Kiran and Uday
 - (d) None of these

18. When Ram asked Shyam about the time, Shyam mistook the hour hand for the minute hand and the minute hand for the hour hand. He incorrectly stated that it was 6:17 O'clock. What was the actual time?
- (a) 3:30 O'clock
(b) 6:30 O'clock
(c) 3:45 O'clock
(d) 6:45 O'clock

19. If Friday is three days after tomorrow, then which day was 3 days before yesterday?
- (a) Saturday
(b) Thursday
(c) Friday
(d) Sunday

20. Study the following Venn diagram carefully and answer the question that follows.



Which of the following set of options **cannot** be represented by the Venn diagram shown above?

- (a) Human being, Teacher, Graduate.
(b) Reptile, Snake, Lizard
(c) Female, Mother, Sister
(d) None of these
21. Six different letters are printed on the six different faces of a dice. It's known that:
1. T, U and R are adjacent.
 2. R, Q and U are adjacent.
 3. R, T and S are adjacent.
 4. Q, T and S are adjacent.

Which face is opposite to the face with alphabet R?

- (a) P
(b) Q
(c) S
(d) T

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 G20 expert group cites the climate crisis to argue that while stakeholders worldwide know what needs to be done to mitigate it, they “lack mechanisms to make this happen on a global scale, especially in emerging markets and developing economies (EMDEs).” According to the expert group, a reformed MDB ecosystem can equip stakeholders to better deal with global challenges in effective ways. It has recommended that MDBs operate more in sync with the developmental priorities of individual nations. Additionally, the expert group called for bringing private sector engagement to the centre of MDB operations by breaking away from the culture of limited operational interaction between their private and sovereign financing arms. In the group’s view, greater coordination between multiple stakeholders is crucial to the success of MDBs. To mitigate coordination failures, the expert group has called for greater involvement of national governments to develop “a home-grown unified vision of goals, policies, investments and financing.” These recommended reforms are to “help address multiple coordination failures among domestic and international stakeholders, public and private.” The expert group also notes that the existing perception and practices of MDBs have adversely impacted their engagement with the private sector. MDBs are often seen as bureaucratic and risk averse, which deters the private sector from being more involved in assisting with financing.

22. Which of the following statements can be *inferred* from the above passage?

1. Developed nations should impart their climate change mitigation techniques to emerging nations.
2. MDBs are not usually considered as risk takers.

Select the correct answer using the codes given below.

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

23. With reference to the above passage, consider the following statements.

1. Increased involvement of the private sector.
2. Increased coordination among stakeholders.
3. Increased financial support to the developing countries.

Which of the above-mentioned statements are among the reforms proposed for MDBs?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) All 1, 2 and 3

Passage – 2

Pointing out that tax evasion is enabling billionaires to enjoy effective tax rates equivalent to 0% to 0.5% of their wealth, the European Union Tax Observatory in its ‘Global Tax Evasion Report 2024’ has called for a global minimum tax on billionaires equal to 2% of their wealth. This would both address evasion and “generate nearly \$250 billion from less than 3,000 individuals,” the report stated. The report justified the proposal by noting that while the number of taxpayers affected by it would be miniscule, the tax rate for them (2%) “would still be very modest” given that the wealth of billionaires has grown at 7% a year annually on average since 1995 (net of inflation). Assessing the impact of international efforts made so far to curb tax evasion, the report highlighted the success of one measure — the automatic exchange of bank information — in reducing offshore tax evasion by a factor of three over the past 10 years. The report observed that before this measure came into effect, “households owned the equivalent of 10% of world GDP in financial wealth in tax havens globally, the bulk of which was undeclared to tax authorities and belonged to high-net-worth individuals.

24. Which of the following statements *best reflects the most logical and rational implication* conveyed by the above passage?

- (a) A minimal tax on billionaires might raise a substantial amount of money and aid in the fight against tax evasion.
- (b) Billionaires have enjoyed lower wealth taxes due to inadequate policy implementation and corrupt bureaucracy.
- (c) Tax heavens need to be scrutinized by authorities to check for tax evasion.
- (d) Undeclared money of billionaires is the reason why tax heavens thrive.

Passage – 3

Microalgae, which form the base of the food chain in the ocean and capture carbon dioxide from the atmosphere, appear to rely on a unique strategy to cope with global warming, according to a new study. The findings are published in the journal Nature Microbiology. As climate change reduces the availability of nutrients in the sea, marine microalgae or eukaryotic phytoplankton fire up a protein called rhodopsin. It is related to the protein in the human eye responsible for vision in dim light. This light-responsive protein is helping the microalgae flourish with the help of sunlight in place of traditional chlorophyll. Microbial rhodopsins, per the study, are proposed to be major light capturers in the ocean. Estimates suggested they may absorb as much light as chlorophyll-based photosynthesis in the sea, which also captures light to generate energy and food. However, their biological role in these organisms was unclear before the study. “Global warming is increasing drought on land and the same thing happens in the ocean: The warmer the surface water gets, the lower are the nutrients in these surface water layers,” Thomas Mock, professor of marine microbiology in University of East Anglia’s School of Environmental Sciences and the study’s author, said in a statement.

25. Which one of the following statements *best reflects the crux* of the passage?
- (a) Owing to adaptation, a phenomenon that occurs on land can also occur in water.
 - (b) It is possible to mitigate global warming using biochemicals found in nature.
 - (c) Adaptability is the key in managing a changing environment.
 - (d) Adaptability to a changing environment reduces productivity.

26. Five years ago, the average age of a family, which consisted of three members, was 27 years. The family now consists of four members as a baby was born recently. The current average age of the family is 25 years. How many years ago was the baby born?
- (a) 1 year ago
 - (b) 2 years ago
 - (c) 3 years ago
 - (d) 4 years ago
27. A person has three cubes of different sizes. The sides of the cubes are of length 6 inch, 8 inch and 1 inch respectively. The person melts the cubes and forms a new cube from it. What shall be the surface area of the new cube?
- (a) 486 inch²
 - (b) 496 inch²
 - (c) 586 inch²
 - (d) 658 inch²
28. Eklavya is the son of Komal. Bhanu is the brother of Dev. Geeta is Dev’s daughter. Komal is married to Dev, who is a man. Maya is maternal aunt of Eklavya. What is the relation between Bhanu and Eklavya?
- (a) Uncle and nephew
 - (b) Brothers
 - (c) Father and son
 - (d) Father-in-law and son-in-law

Direction for the following 2 (two) items:

Read the information given below and answer the items that follow.

Six persons, namely P, Q, R, S, T, and U, are seated around a triangular table. Three individuals occupy each corner of the table, and the rest are positioned at the middle of each side. All of them face inward and have a preference for different colors: Blue, Black, White, Violet, Red, and Green, although not necessarily in that order.

T is seated 2nd to the left of the person who likes White. The individual who likes White sits opposite to U and is seated at the middle of a side. R has a preference for Red and is not an immediate neighbor of T or the person who likes White. Q is positioned 2nd to the left of P, who occupies one of the corners of the table. The individual who likes Violet sits immediately to the left of the person who likes Black, but is not seated opposite to P. Q does not have a liking for Blue.

29. Who likes White colour?

- (a) Q
- (b) S
- (c) P
- (d) R

30. Which one of the following sits at the corner?

- (a) U
- (b) R
- (c) T
- (d) S

31. Find the missing number in the following matrix.

2	8	80
4	24	624
6	48	?

- (a) 1200
- (b) 2400
- (c) 3600
- (d) 4800

32. 105 red boxes of pens, 140 blue boxes of pencils and 175 green boxes of erasers are to be transported across a river. There is only one boat that has to transport the boxes. The weird boatman insists that he will transport only boxes of a single color in one trip. Also, that he will carry the same number of boxes in each trip. What is the maximum number of boxes that the boat can accommodate to ensure that the number of trips are minimized?

- (a) 42
- (b) 28
- (c) 35
- (d) 15

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

Digital technologies are changing the shape of work before our eyes. Yes, they are enabling firms to automate and this will reduce employment in some old, typically low and medium-skill sectors. But they also help firms to increase productivity, to innovate, and subsequently to create new products and sectors. Emerging markets like India stand to gain—but they need to have the right skills at the ready.

33. Which of the following is the **most crucial and logical inference** that can be made from the above passage?

- (a) Effective digital skill oriented policy can help India reap the benefits of emerging digital space.
- (b) Digital technologies have disrupted only the low and medium-skill sectors of the economy.
- (c) With the emergence of digital technology widespread job losses are imminent.
- (d) Emerging markets like India have gained from digital technologies.

Passage – 2

Visa shopping refers to obtaining visas for countries that individuals may or may not visit during the granted visa period. This is because such visas can provide a gateway for people to enter their preferred countries, particularly in Europe, even if they have obtained a visa for another European nation. Additionally, people who have no immediate plans to visit a specific country are also purchasing visas for such nations. This is to increase the chances of obtaining visas for countries of their choice in the future, given how the application process often takes a long time or has chances of rejection. Also, visas usually remain valid for a few years after being issued.

34. Which of the following statements can be *inferred* from the above passage?

1. Visa shopping is not applicable to countries outside the European Union.
2. Visa shopping is helping job seekers to get a work visa in their country of choice.

Select the correct answer using the codes given below.

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

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

- (a) Visa shopping gives people the freedom to go to the countries of their choice.
- (b) People purchase visas for countries they do not plan to visit to increase the chances of obtaining visas for desired destinations.
- (c) Visa shopping is becoming an easy way to enter the European Union
- (d) Visa shopping is popular as it makes it easier to get a residence permit in the target country.

36. Consider the following information and the Question and Statements that follow:

A bag contains a total of 1000 balls of different colors - red, yellow and orange.

Question: Which coloured-ball is present in the highest quantity in the bag?

Statement -1: The number of red balls is two-third of the total number of yellow and orange balls.

Statement 2: The number of yellow balls is $\frac{3}{7}$ th of the total number of red and orange balls.

Which one of the following is correct in respect of the above Questions and Statements?

- (a) The Question can be answered by using one of the Statements alone, but cannot be answered using the other Statement alone.
- (b) The Question can be answered by using either Statement alone.
- (c) The Question can be answered by using both the Statements together, but cannot be answered using either Statement alone.
- (d) The Question cannot be answered even by using both the Statements together.

37. Working together, Rudra and Ananya can complete a piece of work in 24 days. Ananya and Chetan can complete the same work in 40 days, while Rudra and Chetan can complete it in 30 days. Find the number of days in which each of them can complete the same work while working alone?

- (a) 120, 40, 80
- (b) 120, 60, 80
- (c) 40, 60, 80
- (d) None of these

38. Rahul takes 42 minutes to travel from T to C and Prachi takes 56 minutes to travel from C to T. Rahul and Prachi start from T and C respectively at 7:30 a.m. and go towards C and T, respectively. If they take the same route, when will they meet?
- 7:48 a.m.
 - 7:51 a.m.
 - 7:54 a.m.
 - 7:58 a.m.
39. Consider the following Statements and the Question:
- Statement 1:** If the rate of interest had been 3 percentage points more, an additional compound interest of Rs. 1302 would have accrued in two years.
- Statement 2:** Rs. 98 is the difference between simple interest and compound interest at the same rate for two years.
- If principal amount is Rs. 20000, what is the compound interest rate?
- 10%
 - 7%
 - Between 8% and 9%.
 - Data insufficient to answer the question.
40. The students of a primary school are asked to form five digit numbers using the digits 2, 5, 0, 6, and 8 (repetition of digits is not allowed). Which of the following cannot be the difference between any two numbers formed by the students?
- 900
 - 3600
 - 66952
 - 65952
41. There are four positive numbers. The average of first and last number is equal to the average of second and third number. If the average of all the numbers is 20, then which of the following is true?
- The sum of first and last number is more than 40
 - The sum of second and third number is less than 40
 - The average of first and last number is 20
 - None of these
42. A race track is 18 km uphill and 18 km downhill. Anuj and Vishal participate in a race on this track. Anuj runs uphill at 9 kmph and downhill at 15 kmph. Vishal runs uphill as well as downhill at 12 kmph. Who will win the race and by how much distance, if both start the race simultaneously from the bottom of the hill?
- Anuj by 4 km
 - Vishal by 3 km
 - Data insufficient
 - It will be a tie.
43. In a row of books in a library, Ramcharitmanas's position is ninth from the left and position of Ramayan is 9th from the right. Raj accidentally interchanges the positions of these two books, due to which Ramayan becomes 18th from the right. What is the new position of Ramcharitmanas from the left?
- 16th
 - 17th
 - 18th
 - 15th

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

Perception (pratyak–a) is the first and the foundational method of knowing. It is the direct and immediate mode of knowing. It gives us knowledge of what is directly present to the sense. It is the basis of the remaining three methods of knowing in as much as all three derive their starting points from perceptual cognition. It may also be regarded as the final test of the truth of all knowledge in so far as perceptual verification is the most handy and reliable mode of confirmation. The word pratyak–a is used for both the method of knowing and the resultant knowledge. It consists of two types, or rather two stages, namely indeterminate (nirvikalpaka) and determinate (savikalpaka). Indeterminate perception is pure un verbalized experience. It is a conscious but not a self-conscious state in the sense that there can be no direct awareness of it. Its existence is known inferentially. In determinate perception an object is known related to its qualifications. This is possible only if the object and its qualities are first known separately prior to being related. This indeterminate stage is presupposed as the ground of determinate cognition.

44. Which of the following statements best reflects **the most logical and rational message** conveyed by the author of the passage?
- (a) Indeterminate perception is inferred and a self-aware state.
 - (b) The primary means of knowledge and a gauge of veracity is perception.
 - (c) An object's attributes are known in determinate perception.
 - (d) Perception is the final test of knowledge.

Passage – 2

Industrial processes were broken down into simple operations that could be precisely timed, organized and monitored. Mass production demands mass markets. One of the most significant innovations was the construction of a moving assembly line. Modern industrial production needed expensive equipment and continuous monitoring of employees through monitoring or surveillance systems. Over the last decades, there has been a shift to what is often called 'flexible production' and 'decentralization of work'. It is argued that in this period of globalization, it is the growing competition between firms and countries that makes it essential for firms to organize production suiting the changing market conditions.

45. Which one of the following statements best reflects what is **implied** by the passage?
- (a) Innovation in industrial processes is driven by globalization.
 - (b) Monitoring systems are prerequisites for modern industrial production.
 - (c) Decentralization of work is a necessary evil to adjust to the changing market conditions.
 - (d) An increase in competition among firms also increases their productivity.

Passage – 3

In many emerging and developing economies, emissions are heading upwards while clean energy investments are faltering, creating a dangerous fault line in the global efforts to reach climate and sustainable energy goals. Countries are not starting on this journey from the same place, many do not have access to the funds they need to rapidly transition to a healthier and more prosperous energy future and the damaging effects of the COVID-19 crisis are lasting longer in many parts of the developing world. There is no shortage of money worldwide, but it is not finding its way to the countries, sectors, and projects where it is most needed. Governments need to give international public finance institutions a strong strategic mandate to finance clean energy transitions in the developing world.

46. Based on the above passage, the following *assumptions* have been made:
1. Probably not all developing countries face the issue of funding for a successful energy future.
 2. COVID-19 have had a lasting negative impact on green energy programs of both developed as well as developing countries.
- Which of the above *assumptions* is/are valid?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
47. Which of the following statements *best reflects the crux* of the passage?
- (a) A funding distribution mechanism is essential to achieve clean energy goals for the developing world.
 - (b) For clean energy, there is a need for consensus among nations on funding projects and sectors in developing countries.
 - (c) Due to rising emissions, achieving sustainable development goals would be difficult.
 - (d) Developed countries and international public finance institutions should fund the developing countries for clean energy projects.
48. Avinash lent Rs. 20000 to Shikha at compound interest which amounted to Rs. 45000 in 3 years. If the ratio of interest rates for first, second and third year was 4:5:10, then what was the interest rate for the third year (the interest was compounded annually)?
- (a) 50%
 - (b) 60%
 - (c) 45%
 - (d) Can't be determined
49. In a regular convex polygon with 'm' sides, the number of diagonals inside the polygon is 54. The value of m is:
- (a) 14
 - (b) 12
 - (c) 16
 - (d) Can't be determined
50. In Anil's store, there are 20 flashlights, two-fifths of which are defective. For a marriage party decoration, his servant Ram randomly chose three flashlights to place them in the hall. What is the probability that the hall will be lighted?
- (a) $126/285$
 - (b) $217/285$
 - (c) $216/285$
 - (d) $271/285$
51. If $f(x) = (6^x + 6^{-x})/2$, then find the value of $2f(x + y) \times f(x - y)$.
- (a) $f(2x) + f(2y)$
 - (b) $f(2x) \times f(2y)$
 - (c) $f(2x)/f(2y)$
 - (d) $f(2x) - f(2y)$
52. If the cost price is 90% of the selling price, what must be the profit percent?
- (a) 9.09%
 - (b) 4.75%
 - (c) 5 %
 - (d) 11.11%
53. Sanjay, Kumar, Manoj, Amit and Raj are five friends. Sanjay is shorter than Kumar, but taller than Raj. Manoj is the tallest. Amit is slightly shorter than Kumar, but slightly taller than Sanjay. Who is the person who is taller than exactly two people?
- (a) Raj
 - (b) Sanjay
 - (c) Kumar
 - (d) Amit

54. Study the following statements and answer the question that follows.

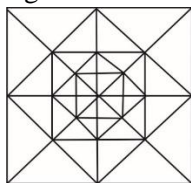
Statement I: The time taken by a boat to cover a certain distance downstream is half the time taken by it to cover the same distance upstream.

Statement II: The upstream speed of the boat is 10 m/s.

Which of the following is correct?

- (a) Speed of the boat in still water is three times the speed of the water current.
- (b) Downstream speed of the boat is 7 m/s.
- (c) Speed of the boat in still water is 8 m/s.
- (d) None of these

55. How many squares are there in the following figure?



- (a) 17
- (b) More than 20 but less than 24
- (c) More than 24
- (d) None of these

56. In the question given below, there are three statements followed by four conclusions numbered I, II, III and IV. You have to take the given statements to be true even if they seem to be at variance with commonly known facts and judge the conclusions on that basis.

Statements:

- (i) Some mangoes are oranges.
- (ii) Some oranges are bananas.
- (iii) All lemons are bananas.

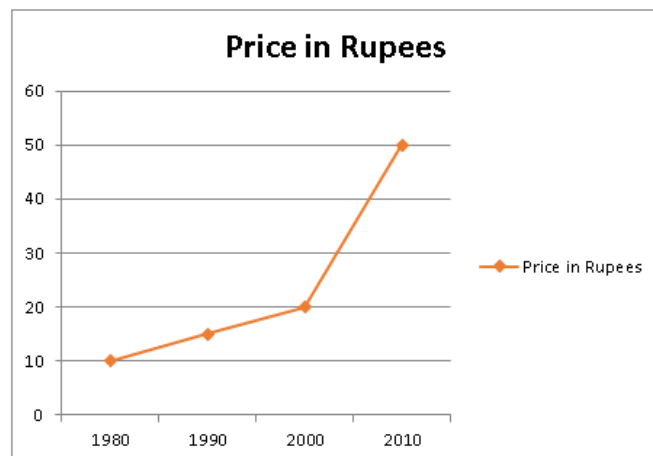
Conclusions:

- I. Some mangoes are lemons
- II. Some mangoes are bananas
- III. No lemon is mango
- IV. All bananas are lemons.

Which of the conclusions given above is/are correct?

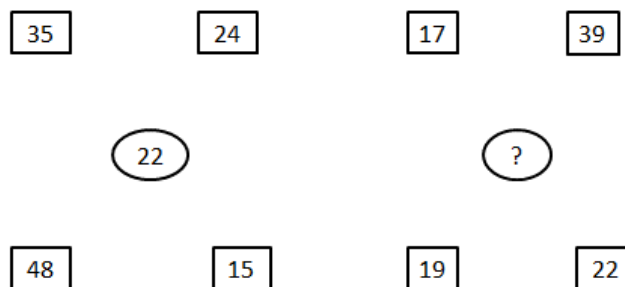
- (a) Only IV follows
- (b) Only II and III follow
- (c) Only either II or III follows
- (d) Only either I or III follows

57. The year-wise variation in respect of price of a certain commodity is depicted in the graph shown below:



Which of the following statements regarding the price of the commodity must be true?

- (a) The price of the commodity in the year 2011 was higher than Rs. 50.
 - (b) The price of the commodity in the year 2011 was higher than the average price of the commodity during the years 2000 to 2010.
 - (c) The price of the commodity in the year 2000 was higher than the average price of the commodity during the years 1990 to 2000.
 - (d) The price of the commodity in the year 2000 was less than the average price of the commodity during the years 1980 to 2000.
58. Examine the following two figures in which the numbers follow a specific pattern.



What is the missing number in the second figure?

- (a) 28
- (b) 19
- (c) 15
- (d) 23

59. A certain three-digit number has the following characteristics:

1. The hundreds digit leaves a remainder 2 when divided by 4.
2. The tens digit is even.
3. The number is divisible by 3 as well as 5.

How many such three-digit numbers are there?

- (a) 2
- (b) 3
- (c) 4
- (d) 6

60. A train covers a distance in 100 minutes, if it runs at a speed of 63 km per hour on an average. Find the speed at which the train must run to reduce the time of journey by 20 minutes.

- (a) 55 km/hr
- (b) 70 km/hr
- (c) 54 km/hr
- (d) 78.75 km/hr

61. The average of six numbers is a . The average of the numbers occurring at even places and odd places are b and c respectively. Which of the following statements is true?

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

62. Find the next term in the following series.
ABFE, BDOD, CFIC,

- (a) DHRB
- (b) DHPB
- (c) DHOB
- (d) None of these

63. Find the missing term.

RHA : XCF :: ISZ : ?

- (a) ONE
- (b) OOE
- (c) CXU
- (d) OPE

64. In a certain code language:

I. 'sut la nom' means 'Allow me food'.

II. 'la ko tid' means 'Food is good'.

III. 'rub on sut' means 'Give me sword'.

IV. 'ko tin row' means 'Good news come'.

Which of the following code represents 'is' in this language?

- (a) ko
- (b) la
- (c) tin
- (d) tid

65. Arrange the following words in a logical and meaningful order.

1. Ripening
2. Vegetative
3. Flowering
4. Budding
5. Sprout
6. Seeding

- (a) 6, 5, 1, 3, 4, 2
- (b) 6, 5, 3, 2, 4, 1
- (c) 5, 6, 2, 4, 3, 1
- (d) 5, 2, 6, 4, 1, 3

Directions for the following 6 (six) items:

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

Passage – 1

“What’s the philosophy of life”? This is a question that has been pondered upon by great personalities of the world, of all ages. Simply speaking, it explains a person’s belief as to how one should live life or utilise it. To figure it out, you need to understand what you want out of life. Although it seems simple, it can be tricky for many people to crack it accurately. The first thing you need to do, dear folks, is to introspect yourselves. Privacy is essential in this regard, and every individual should have access to it. One thing that would help with your introspection is meditation. The second important point to bear in mind is that your philosophy of life should be practical. Life philosophy should be such that it works in the real world instead of being some fancy inapplicable mental gymnastics.

66. Which of the following statements **best reflects the logical inference** from the passage given above?
- (a) Without understanding the philosophy of life, one is always occupied with unnecessary thoughts and faces difficulty in success.
 - (b) Understanding the philosophy of life is not easy and is only possible for great personalities who meditate and are practical.
 - (c) The art of understanding personal goals and living in the world needs introspection and realism.
 - (d) Poor introspection and lack of privacy cause unawareness regarding the way to live life or utilize it.

Passage – 2

Holidays are making a comeback after several years of disruption caused by the COVID-19 pandemic. Nearly 4 billion passengers boarded international flights in 2022, up from fewer than 2 billion in 2020. Recent research suggests that people are likely to continue travelling more in 2023 and beyond. But this resurgence in travel is concerning. The tourism sector alone is responsible for an estimated 8%–10% of global greenhouse gas emissions. And conditions at traditional holiday destinations in high summer are becoming increasingly unpleasant if not downright hazardous. As the effects of climate change become increasingly severe, there’s genuine concern that traditional destinations will become too hot in summer to remain appealing to visitors.

67. Based on the above passage, which of the following can be **the most logical implication(s)**?
- 1. People may have to look for new holiday destinations on account of climate change.
 - 2. Without addressing climate change, enjoying holidays will be difficult.
- Select the correct answer using the codes given below.
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
68. What is the main idea that we can **infer** from the passage?
- (a) People should plan their holidays according to the climate of the destination.
 - (b) More than climate change, events like COVID-19 impact the tourism sector the most.
 - (c) Tourism creates a vicious cycle of negative consequences when it comes to climate change.
 - (d) In the context of climate change, people must promote responsible tourism.

Passage – 3

Historical injustices are generally seen as targeting entire groups, either disfavoured minorities or foreign populations. While the barriers to reparations are significant, historical events are the subject of a growing number of legal and/or political claims by groups seeking redress. The proliferation of such demands may represent a global tribute to the strength of human rights doctrine and its moral claim on the international community. The notion of reparations is close to the current idea of restorative justice as a potentially transformative social action. Legislatures may be better suited to determine reparations: they are not bound by precedent and legal doctrine but can fashion equitable remedies.

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

1. Reparations help heal historical injustices and will prevent future injustices.
2. The nature of present violations of human rights is different from the historical ones.

Select the correct answer using the codes given below.

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

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

- (a) One cannot deny the reality of historical injustices across nations.
(b) Without settling historical injustices, it is not possible to provide justice today.
(c) Restorative justice is not the responsibility of one but all.
(d) There is an increasing demand to redress historical injustices and provide reparations.

Passage – 4

Lack of concerted effort to control the growing rates of malnutrition globally can cause nearly 194 million children born through 2030 to be stunted, an analysis by Save the Children, an international non-profit. This means, at the current rate, nearly one newborn will be stunted every second over the next seven years, a United Nations note on the data found. Save The Children urged world leaders gathering next week at the Sustainable Development Goals (SDG) Summit to “urgently accelerate progress towards meeting the goals”. Sub-Saharan Africa will be most affected, with an estimated 86 million cases of stunting for children born between 2023 and 2030, the analysis showed. It will be closely followed by South Asia with 67 million cases, it added. “The Eastern Asia and Pacific region is set to witness nearly 22 million stunted children, while the Middle East and North Africa brace for 9.6 million cases, and Latin and Central America anticipate 6.7 million children facing stunted growth,” the UN statement noted, adding: Pakistan and the Democratic Republic of Congo (DRC) stand among the top four countries expected to face the highest levels of stunting in the next seven years with over 25% of their populations currently experiencing crisis levels of hunger. The findings also underlined the link between extreme poverty and stunting.

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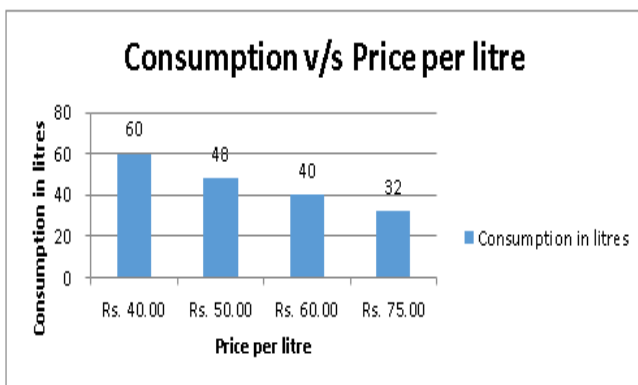
71. Which of the following statements can be *inferred* from the above passage?

1. Stunting among children is a problem that is worldwide, faced by poor and rich countries alike.
2. In the future, the list denoting the highest levels of stunting will be completely dominated only by African countries, with country of no other region in the top 10.

Select the correct answer using the codes given below.

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

72. A car owner wants to keep his monthly petrol bill constant. The following graph shows his monthly petrol consumption and the price per litre:



Consumption v/s Cost per litre

If the price of petrol goes up to Rs. 80 per litre, his consumption (in litres) will be:

- (a) 30
- (b) 28
- (c) 26
- (d) 24

73. Ajay goes to his friend Shyam's house. While returning, he becomes tired, causing him to cover a distance of 10 km in the first hour. Afterward, in each subsequent hour, his speed reduces to half of the speed in the previous hour. How much time does it take for him to be 25 km away from his friend's house?

- (a) 10 hours
- (b) 12 hours
- (c) 14 hours
- (d) None of these

74. Relationship between the ages of seven friends - P, Q, R, S, T, U and V is given below:

$$Q > P \geq U > S = V \leq T < R$$

Based on the above, following conclusions are made.

I. $S < R$

II. $P > T$

Which of the conclusions given above is/are correct?

- (a) Only conclusion I follows
- (b) Either conclusion I or II follows
- (c) Both conclusions follow
- (d) Neither conclusion I nor conclusion II follows

75. Raju and Mitali planted a papaya tree in their backyard 2 years ago. Raju went for collage thereafter. When he came home after 2 years, he saw that papaya tree's height was 540 cm. Mitali told him that this papaya tree increases in height at a rate of 20% per year. What was its height when they planted it?

- (a) 450 cm
- (b) 375 cm
- (c) 325 cm
- (d) 410 cm

76. Ramesh and Suresh started walking from the same point in opposite directions. After travelling 2 km each, Ramesh takes a left turn and Suresh takes a right turn and continue walking. Based on the information, which one of the following statements is correct?
- (a) After both have travelled 3 km, the distance between them is 6 km
 - (b) They meet after each has travelled 4 km.
 - (c) They meet once and then keep going away from each other.
 - (d) They go on without meeting each other.

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

In recent years, there has been growing concern about the threat to privacy posed by new technologies, such as big data and artificial intelligence. Corporations can use these technologies to collect and analyse vast amounts of personal information, which can then be used to target individuals with advertising or to make decisions about their employment, housing, or access to credit. Privacy is a necessary condition for individuals to be able to fully participate in society. When individuals have their privacy respected, they are free to make their own choices about their lives and to pursue their interests without fear of government or corporations.

77. Which one of the following is **the most logical and rational inference** that can be made from the above passage?
- (a) Digital technologies deployed by private corporations are in violation of the right to privacy of the individual.
 - (b) Individual privacy must be protected against the misuse of digital technologies.
 - (c) Governments must respect individual privacy.
 - (d) It is difficult to promote the growth of digital technologies and digital economy while respecting individual privacy.

Passage – 2

Climate change and technology are intrinsically linked in the ongoing battle to address and mitigate the impacts of global warming. The industrial and technological advancements of the past century have been a significant driver of greenhouse gas emissions. Energy-intensive processes, transportation, and deforestation, often enabled by technology, have contributed to rising carbon dioxide levels. Conversely, technology offers vital tools to combat climate change. Renewable energy technologies, such as solar and wind power, have become more efficient and cost-effective, reducing our reliance on fossil fuels. Innovations in energy storage, electric vehicles, and sustainable agriculture offer pathways to a lower-carbon future. Furthermore, technology aids in climate monitoring and data collection, providing valuable insights into climate patterns and trends. Climate modelling and simulation technologies help scientists predict the impacts of climate change and formulate strategies for adaptation and mitigation.

78. Which of the following is *the most rational and logical inference* that can be drawn from the passage?

- (a) Reliance on technologies for climate change mitigation is due to their efficiency and cost-effectiveness.
- (b) Technology in the context of climate change is a necessary evil.
- (c) Without climate monitoring and data collection, it is difficult to understand the pattern & history of climate change.
- (d) In the context of climate change, renewable energy, electric vehicles, and climate modelling are the technologies of the future.

Passage – 3

Migration is a dynamic force that shapes the economic landscape of nations. It has a profound impact on various sectors. Understanding these effects is essential for policymakers and industry leaders. Its dual role in agriculture can alleviate labour shortages during planting and harvesting seasons, and it can lead to the depletion of rural labour forces. Migrant workers often fill low-skilled, labour-intensive jobs, propelling production, and export industries. However, it can also contribute to wage disparities and worker exploitation. Skilled immigrants can contribute to innovation and economic growth, while the unskilled may face challenges in access to social services and integration. Migration is a complex issue with multifaceted impacts. To harness its benefits and mitigate its challenges, comprehensive policies and strategies are needed, addressing the unique demands of agriculture, manufacturing, and services while fostering inclusivity and economic growth.

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

- 1. Rural-to-urban migration for innovation and economic growth is visible across nations.
- 2. Migration has the potential to solve the fundamental issues of not only manufacturing and services but also agriculture.

Select the correct answer using the codes given below.

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

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

- (a) Strong policies and strategies are needed to counter rural-to-urban migration of skilled labour.
- (b) Migration from rural to urban areas leads to job creation in the manufacturing and services sector.
- (c) Migration in any economy is a zero-sum game in the context of different sectors.
- (d) Prudent policies are imperative to address the 'double-edged sword' of migration.

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