

QUANTITATIVE APTITUDE AND DATA INTERPRETATION

1. A flight, traveling to a destination 11,200 kms away, was supposed to take off at 6:30 AM. Due to bad weather, the departure of the flight got delayed by three hours. The pilot increased the average speed of the airplane by 100 km/hr from the initially planned average speed, to reduce the overall delay to one hour.
Had the pilot increased the average speed by 350 km/hr from the initially planned average speed, when would have the flight reached its destination?
- (1) 8:10 PM (2) 10:36 PM (3) 11:30 PM (4) 5:10 PM (5) 7:50 PM
2. Consider the equation
 $\log_5 (x - 2) = 2 \log_{25} (2x - 4)$, where x is a real number.
For how many different values of x does the given equation hold?
- (1) 1 (2) Infinitely many (3) 0 (4) 4 (5) 2
3. In a school, the number of students in each class, from Class I to X, in that order, are in an arithmetic progression. The total number of students from Class I to V is twice the total number of students from Class VI to X.
If the total number of students from Class I to IV is 462, how many students are there in Class VI?
- (1) 83 (2) 88 (3) None of the remaining options is correct
(4) 77 (5) 93
4. The cost of running a movie theatre is Rs. 10,000 per day, plus additional Rs. 5000 per show. The theatre has 200 seats. A new movie released on Friday. There were three shows, where the ticket price was Rs. 250 each for the first two shows and Rs. 200 for the late-night show.
For all shows together, total occupancy was 80%. What was the maximum amount of profit possible?
- (1) Rs. 87,000 (2) Rs. 1,16,000 (3) Rs. 95,000 (4) Rs. 1,20,000 (5) Rs. 91,000
5. In a small college, students are allowed to take only one specialization. Traditionally, only two specializations are offered: Science and Arts. Students enrolled to specialize in Science must take Physics and Mathematics subjects, while students enrolled to specialize in Arts must take Economics and Political Science subjects. Students enrolled in Science are not allowed to take either Economics or Political Science, while students enrolled in Arts are not allowed to take either Physics or Mathematics.
Recently, the college has started a third specialization called MatEco that requires students to take Economics and Mathematics. However, MatEco students would not be allowed to take either Physics or Political Science. When the college opens this new specialization for enrolment, it allows students, originally enrolled in Science or Arts, to switch to MatEco.
From among the students originally enrolled in Arts, 20 students switch to MatEco. This makes the number of Science students twice the number of Arts students. After this, from among the students who originally enrolled in Science, 45 students switch to MatEco. This makes the number of Arts students twice the number of Science students.
In total, how many students, from among those originally enrolled in Science or Arts, are now taking Economics?
- (1) 65 (2) 80 (3) None of the remaining options is correct
(4) 45 (5) 95
6. A group of boys is practising football in a rectangular ground. Raju and Ratan are standing at the two opposite mid-points of the two shorter sides. Raju has the ball, who passes it to Rivu, who is standing somewhere on one of the longer sides. Rivu holds the ball for 3 seconds and passes it to Ratan. Ratan holds the ball for 2 seconds and passes it

back to Raju. The path of the ball from Raju to Rivu makes a right angle with the path of the ball from Rivu to Ratan. The speed of the ball, whenever passed, is always 10 metre per second, and the ball always moves on straight lines along the ground.

Consider the following two additional pieces of information:

- I. The dimension of the ground is 80 metres $\times$ 50 metres.
- II. The area of the triangle formed by Raju, Rivu and Ratan is 1000 square metres.

Consider the problem of computing the following: how many seconds does it take for Raju to get the ball back since he passed it to Rivu? Choose the correct option

- (1) I and II both are required to solve the problem
- (2) Either of I or II, by itself, is sufficient to solve the problem
- (3) I alone is sufficient to solve the problem.
- (4) II alone is sufficient to solve the problem
- (5) The problem cannot be solved even with both I and II.

7. Consider a 4-digit number of the form $abbb$, i.e., the first digit is a ($a > 0$) and the last three digits are all b . Which of the following conditions is both NECESSARY and SUFFICIENT to ensure that the 4-digit number is divisible by a ?

- (1) $9b$ is divisible by a
- (2) b is divisible by a
- (3) $3b$ is divisible by a
- (4) $21b$ is divisible by a
- (5) b is equal to 0

8. A farmer has a triangular plot of land. One side of the plot, henceforth called the *base*, is 300 feet long and the other two sides are equal. The perpendicular distance, from the corner of the plot, where the two equal sides meet, to the base, is 200 feet.

To counter the adverse effect of climate change, the farmer wants to dig a circular pond. He plans that half of the circular area will be inside the triangular plot and the other half will be outside, which he will purchase at the market rate from his neighbour. The diameter of the circular plot is entirely contained in the base and the circumference of the pond touches the two equal sides of the triangle from inside.

If the market rate per square feet of land is Rs. 1400, how much does the farmer must pay to buy the land from his neighbour for the pond? (Choose the closest option.)

- (1) Rs. 7,42,80,000
- (2) Rs. 6,33,60,000
- (3) Rs. 3,16,80,000
- (4) Rs. 2,98,20,000
- (5) Rs. 4,25,60,000

9. A local restaurant has 16 vegetarian items and 9 non-vegetarian items in their menu. Some items contain gluten, while the rest are gluten-free.

One evening, Rohit and his friends went to the restaurant. They planned to choose two different vegetarian items and three different non-vegetarian items from the entire menu. Later, Bela and her friends also went to the same restaurant: they planned to choose two different vegetarian items and one non-vegetarian item only from the gluten-free options. The number of item combinations that Rohit and his friends could choose from, given their plan, was 12 times the number of item combinations that Bela and her friends could choose from, given their plan.

How many menu items contain gluten?

- (1) 1
- (2) 4
- (3) 3
- (4) 2
- (5) 5

10. The roots of the polynomial are $P(x) = 2x^3 - 11x^2 + 17x - 6$ the radii of three concentric circles. The ratio of their area, when arranged from the largest to the smallest, is:

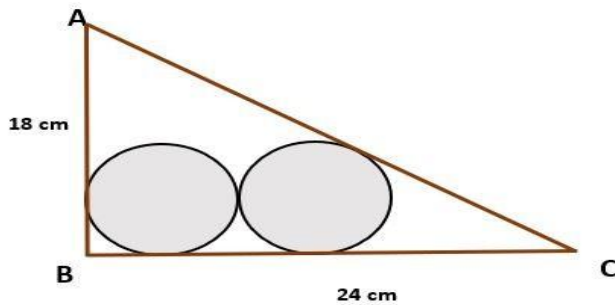
- (1) 16 : 6 : 3
- (2) 36 : 16 : 1
- (3) None of the remaining options is correct
- (4) 6 : 2 : 1
- (5) 9 : 4 : 1

11. A king has distributed all his rare jewels in three boxes. The first box contains $\frac{1}{3}$ of the rare jewels, while the second box contains $\frac{k}{5}$ of the rare jewels, for some positive integer value of k . The third box contains 66 rare jewels. How many rare jewels does the king have?

- (1) Cannot be determined uniquely from the given information
- (2) 990
- (3) 240
- (4) 660
- (5) 1080

12. Consider a right-angled triangle ABC, right angled at B. Two circles, each of radius r , are drawn inside the triangle in such a way that one of them touches AB and BC, while the other one touches AC and BC. The two circles also touch each other (see the image below).

If AB = 18 cm and BC = 24 cm, then find the value of r .



- (1) 4 cm (2) 3 cm (3) 4.5 cm
 - (4) 3.5 cm (5) None of the remaining options is correct
13. The least common multiple of a number and 990 is 6930. The greatest common divisor of that number and 550 is 110. What is the sum of the digits of the least possible value of that number?
- (1) 14 (2) 9 (3) 18
 - (4) None of the remaining options is correct (5) 6
14. FS food stall sells only chicken biryani. If FS fixes a selling price of Rs. 160 per plate, 300 plates of biriyani are sold. For each increase in the selling price by Rs. 10 per plate, 10 fewer plates are sold. Similarly, for each decrease in the selling price by Rs. 10 per plate, 10 more plates are sold. FS incurs a cost of Rs. 120 per plate of biriyani, and has decided that the selling price will never be less than the cost price. Moreover, due to capacity constraints, more than 400 plates cannot be produced in a day.
- If the selling price on any given day is the same for all the plates and can only be a multiple of Rs. 10, then what is the maximum profit that FS can achieve in a day?
- (1) None of the remaining options is correct (2) Rs. 41,400 (3) Rs. 28,900
 - (4) Rs. 52,900 (5) Rs. 25,300
15. Consider the system of two linear equations as follows: $3x + 21y + p = 0$; and $qx + ry - 7 = 0$, where p , q , and r are real numbers.
- Which of the following statements DEFINITELY CONTRADICTS the fact that the lines represented by the two equations are coinciding?
- (1) The largest among p , q , and r is q (2) p cannot be 0 (3) The smallest among p , q , and r is r
 - (4) r and q must have same signs (5) p and q must have opposite signs

Directions for questions 16 to 18: Read the following scenario and answer the THREE questions that follow.

The *upper hinge* of a dataset is the median of all the values to the right of the median of the dataset in an ascending arrangement, while the *lower hinge* of the dataset is the median of all the values to the left of the median of the dataset in the same arrangement.

For example, consider the dataset 4, 3, 2, 6, 4, 2, 7. When arranged in the ascending order, it becomes 2, 2, 3, **4**, 4, 6, 7. The median is 4 (the bold value), and hence the upper hinge is the median of 4, 6, 7, i.e., 6. Similarly, the lower hinge is 2.

A student has surveyed thirteen of her teachers, and recorded their work experience (in integer years). Two of the values recorded by the student got smudged, and she cannot recall those values. All she remembers is that those two values were unequal, so let us write them as A and B , where $A < B$. The remaining eleven values, as recorded, are: 5, 6, 7, 8, 12, 16, 19, 21, 21, 27, 29. Moreover, the student also remembers the following summary measures, calculated based on all the thirteen values:

Minimum: 2

Lower Hinge: 6.5

Median: 12

Upper Hinge: 21 Maximum: 29

16. Which of the following is a possible value of B ?

- (1) 13 (2) 6 (3) 8 (4) 29 (5) 2

17. Based on the information recorded, which of the following can be the average work experience of the thirteen teachers?

- (1) 13.5 (2) 14 (3) 13 (4) 12.5 (5) 12

18. While rechecking her original notes to re-enter the smudged values of A and B in the records, the student found that one of the eleven recorded work experience values that did not get smudged was recorded wrongly as half of its correct value. After re-entering the values of A and B , and correcting the wrongly recorded value, she recalculated all the summary measures. The recalculated average value was 15.

What is the value of B ?

- (1) 12 (2) 10 (3) Cannot be determined from the given information
(4) 9 (5) 7

Directions for questions 19 to 21: Read the following scenario and answer the THREE questions that follow.

A T20 cricket match consists of two teams playing twenty each, numbered 1 to 20. The runs scored in any over is a non-negative integer. The rate the end of any over is the average runs scored up to and including that over, i.e., the run rate at the end of the k -th over is the average number of runs scored in overs numbered 1, 2, ..., where $1 \leq k \leq 20$, positive integer.

The following table indicates the run rate of a team at the end of some of the overs during a T20 cricket match (correct up to 2 decimal places), where $1 \leq N - 2 < N + 6 \leq 20$, a positive integer. It is also known that the team did not score less than 6 runs and more than 15 runs in any over.

Over Number	Run Rate
$N - 2$	8.00
N	7.43
$N + 2$	8.11
$N + 4$	8.45
$N + 6$	8.08

19. What is the value of N ?

- (1) 13 (2) 7 (3) 9 (4) 14 (5) 12

20. In which of these pairs of over numbers, the team could have scored 22 runs in total?

- (1) 9 and 10 (2) 7 and 8 (3) 6 and 7 (4) 8 and 9 (5) 10 and 11

21. In which of the following over numbers, the team MUST have scored the least number of runs?

- (1) 11 (2) 10 (3) 7 (4) 9 (5) 8

Directions for questions 22 to 24: Read the following scenario and answer the THREE questions that follow.

A store offers a choice of five different discount coupons to its customers, described as follows:

Coupon A: A flat discount of Rs. 250 on a minimum spend of Rs. 1200 in one transaction.

Coupon B: A 15% discount on a minimum spend of Rs. 500 in one transaction, up to a maximum discount of Rs. 300.

Coupon C: A flat discount of Rs. 100 on a minimum spend of Rs. 600 in one transaction.

Coupon D: A 10% discount on a minimum spend of Rs. 250 in one transaction, up to a maximum discount of Rs. 100.

Coupon E: A flat discount of Rs. 50 on a minimum spend of Rs. 200 in one transaction.

The customers are allowed to use at most one coupon in one transaction, i.e., two or more coupons cannot be combined for the same transaction.

- 22.** Four customers used four different discount coupons for their respective transactions in such a way that they obtained a total discount of Rs. 710.

Which discount coupon was not used?

- (1) Coupon D (2) Coupon A (3) Coupon B (4) Coupon E (5) Coupon C

- 23.** Four customers used four different discount coupons for their respective transactions in such a way that nobody used any discount coupon sub-optimally. (A discount coupon is used sub-optimally if using another discount coupon could have resulted in a higher discount for the same transaction.)

What was the minimum combined spend (before application of any discount)?

- (1) Rs. 2500 (2) Rs. 2300 (3) Rs. 1550 (4) Rs. 2350 (5) Rs. 2250

- 24.** A family wanted to purchase four products worth Rs. 1000 each, and another product worth Rs. 300. They were told that they could:

- I) pay for the five products through one or more transactions in any way they wanted as long as the purchase amount of any one product would not get split into different transactions, and
II) use the same discount coupon repeatedly for separate transactions, if they opt for II) use the same discount coupon repeatedly for separate transactions, if they opt for

What was the maximum discount that they could obtain for their purchase?

- (1) Rs. 650 (2) None of the remaining options is correct. (3) Rs. 600
(4) Rs. 645 (5) Rs. 700

Directions for questions 25 to 26: Read the following scenario and answer the TWO questions that follow.

Aman has come to the market with Rs. 100. If he buys 5 kilograms of cabbage and 4 kilograms of potato, he will have Rs. 20 left; or else, if he buys 4 kilograms of cabbage and 5 kilograms of onion, he will have Rs. 7 left. The per kilogram prices of cabbage, onion and potato are positive integers (in rupees), and any type of these vegetables can only be purchased in positive integer kilogram, or none at all.

- 25.** Aman decides to buy only onion, in whatever maximum quantity possible (in positive integer kilogram), with the money he has come to the market with.

How much money will he be left with after the purchase?

- (1) Rs. 12 (2) Re. 1 (3) Rs. 5 (4) Rs. 7 (5) Rs. 9

- 26.** Aman decides to buy only onion and potato, both in positive integer kilogram, in such a way that the money left with him after the purchase will be insufficient to buy a full kilogram of either of the two vegetables.

If all such permissible combinations of purchases are equally likely, what is the probability that Aman buys more onion than potato?

- (1) $3/10$ (2) $2/9$ (3) $4/10$ (4) $5/6$ (5) $7/20$

Directions for questions 27 and 28: Read the following scenario and answer the TWO questions that follow.

41 applicants have been shortlisted for interviews for some data analyst positions. Some of the applicants have advanced expertise in one or more fields among the following: data analysis, database handling and coding. The numbers of applicants with different advanced expertise are given in the 2×8 table below.

The number of applicants with advanced expertise in all three fields is given as x in the table, where x is a non-negative integer.

Field	Data Analysis	Database Handling	Coding	Data Analysis and Data Handling	Database Handling and Coding	Data Analysis and coding	All three
Number of candidate with Advanced Expertise	12	5	7	2	3	6	x

27. What BEST can be concluded about the value of x ?

- (1) 1 or 2 only (2) 2 only (3) 1 only (4) 0 or 1 only (5) 0, 1 or 2

28. How many applicants DID NOT have advanced expertise in any of the three given fields?

- (1) 28 (2) Cannot be determined uniquely from the given information (3) 26
(4) 25 (5) 27

DECISION MAKING

Directions for questions 29 and 31: Read the following scenario and answer the THREE questions that follow.

Raman had been working tirelessly as a Project Manager in the IT department of Flying Groceries, a renowned app-based supply chain company, for the past three years. Having graduated from a top-tier engineering college, he dived straight into the corporate world, managing projects with great zeal that inspired his seniors.

At the end of his first year with Flying Groceries, impressed with his hard work, Raman's boss, Suraj, the founder-CEO of Flying Groceries, fast-tracked his promotion and made him Delivery Manager responsible for multiple projects of a vertical. Suraj also promised Raman the position of Chief Operation Officer in the fifth year of his tenure.

In search of a greater career trajectory, Raman pursued entrance exams for business schools. His efforts bore fruits as he secured a place in the country's best business school, known for a strong alumni base, stellar placement records and demanding academic requirements.

Raman was delighted; he had three months to join the business school. Flying Groceries demanded that any employee who wished to leave the organization should give at least a month's notice. Raman decided to continue working and enriching his work experience, which will be beneficial when applying to companies after graduating from the business school. Therefore, he decided not to share the news of the offer with anyone else for the time being.

29. Flying Groceries was planning to implement a much-needed update to enhance the functionality and user experience of their app. According to Suraj, the update was expected to take at least six months to complete. Suraj wanted Raman to lead this project because his leadership was critical for the project's success. However, Raman knew that he would be there only for three months; he was not sure whether he should accept the project.

Which of the following information, if true, will BEST assist Raman in accepting the role of leading the project?

- (1) Raman could requisition more human resources to his team for the next three months.
(2) The last two projects Raman led were successfully completed by his subordinates during his exams
(3) Suraj might advise against the update if he got to know that Raman was leaving soon.
(4) During his time with Flying Groceries, Raman finished some projects ahead of schedule.
(5) Raman had previously taken many projects home, and the business school would have no classes during the weekends

30. After a couple of months, Raman resigned. Suraj was shocked by Raman's resignation and asked him to reconsider his decision. When Raman expressed his inability to continue, Suraj felt betrayed. This led to a series of heated arguments between them, and they swore to never work together again.

Raman joined the business school; however, he soon realized that that summer internship placements were approaching. Consequently, he would require verification of his responsibilities from Flying Groceries.

Which of the following actions is the MOST appropriate for Raman to obtain his verification?

- (1) Raman should write an email to Suraj, emphasizing Raman's roles and responsibilities, and request him to approve them
- (2) Raman should re-establish communication with Suraj through social media platforms like Facebook and persuade him there.
- (3) Raman should reach out to a mutual acquaintance within the company and ask her to intervene.
- (4) Raman should write a sincere and professional apology letter, expressing regret for the argument Raman had with Suraj.
- (5) Raman should contact the HR representative to facilitate the verification of Raman's responsibilities.

31. Raman received a verification letter from Flying Groceries outlining his basic job responsibilities during his tenure there. However, Raman required a document to substantiate the additional responsibilities he undertook at Flying Groceries by going beyond his call of duty. Sadly, he did not have any documentation of such additional responsibilities.

Which of the following options will BEST help substantiate the additional responsibilities Raman undertook?

- (1) Raman should create documentation, detailing quantifiable metrics and results about his extra work based on his memory.
- (2) Raman should reach out to the recently recruited Chief Supply Chain officer at Flying Groceries to highlight the additional work he contributed to facilitate the officer's tasks.
- (3) Raman should collect testimonials on his additional responsibilities from his ex-teammates at Flying Groceries.
- (4) Raman should call Suraj and explain that he will not be able to get a consulting or an operations job without verification.
- (5) Raman should write a public post on social media, appealing to Suraj, mentioning the challenges he faced while taking additional responsibilities, and how he overcame them.

Directions for questions 32 to 34: Read the following scenario and answer the THREE questions that follow.

Kasta, a small industrial town hosted a steel plant and its associated ancillary companies. Most of its residents were steel plant employees from different states of the country. While the town offered employment opportunities, it lacked an airport. For those wanting to fly, the nearest airport was in Michaelganj, 100 kms from Kasta. To reach the airport, people rented taxi services available at Kasta, and Prabhu was one such taxi-service provider.

Prabhu's rates were reasonable — a trip to airport cost Rs. 2200, but for a round trip, the fare was Rs. 3000. Yet, it was not just the affordability that made him popular, his reputation for punctuality and reliability was unmatched. When it came to ensuring the safety of women travelling alone, he would always be the first choice. Such was his trustworthiness that even the steel plant would solicit his services when expecting solo female visitors. Moreover, whenever residents encountered issues with their personal cars, they would turn to Prabhu for help.

However, the world shifted when the COVID-19 pandemic struck. Travel restrictions and safety concerns limited Prabhu's trips to Michaelganj for over a year and a half. Financial strain followed, with accumulating interest on his home loan. He was weighed down by debt, but things improved once COVID-19 travel restrictions were lifted. Having faced financial hardships during COVID-19, he sought to offset his losses by raising the fare. Yet, he was aware of the stiff competition in town, where many others offered services at a similar fare as his.

32. Prabhu decided to increase the taxi fare for all future trips. He planned to charge Rs. 3000 for a one-way trip to the airport, and Rs. 1000 more for a round trip.

Which of the following facts will BEST help Prabhu's regular customers in accepting the increase in fare?

- (1) Because, Prabhu is facing financial hardships.
- (2) Because, Prabhu offers repair services to residents' car-related issues
- (3) Because, the cost of living has gone up in Kasta
- (4) Because, Prabhu serves many top officials of the steel plant
- (5) Because, Prabhu is punctual and reliable

33. After Prabhu increased his charges by 30%, the revenue flow was promising in the beginning, especially from the steel plant's official trips. After a few months, he noticed a dip in private bookings. On exploring further, Prabhu realized that while women travelling solo still preferred Prabhu's service, some of his regular customers were choosing his competitors when travelling as a family. However, he knew that his competitors, while charging lower than him, were still tardy and sometimes cancelled at the last minute.

Which of the following options will BEST help Prabhu to retain his revenue flow?

- (1) Give 50% discount for personal trips. (2) Revert the pricing of services to its prior rate
(3) Charge a premium for the steel plant's official trips (4) Charge a premium when women travel solo.
(5) Stick to his current increased charges

34. Saroj, the new Chief Financial Officer (CFO) at the steel plant, used the services of Manoj when he first travelled from the Michaelganj airport to the plant. Manoj was a rival of Prabhu in the taxi service business at Kasta. Manoj, upon learning that Saroj would be responsible for hiring taxi services for the steel plant, charged Saroj only Rs. 1500 for that trip. Further, he assured Saroj to charge the same for a one way-trip and additional Rs. 500 for a round trip to the airport.

Upon realizing that the plant utilized Prabhu's services for all official trips to the airport, Saroj contacted Prabhu to discuss the rates offered by Manoj and inquired why the plant should continue using his service when Manoj provided the same at a lower price. Prabhu realized that Manoj charged an extremely low price just to push Prabhu out of his business in the Steel Plant.

Which of the following reasons given by Prabhu will BEST help his cause?

- (1) Prabhu should introduce Saroj to Ms. Nidhi Tawde, his regular customer.
(2) Prabhu should warn Saroj that Manoj's offer is not sustainable.
(3) Prabhu should offer to lower his price to the one offered by Manoj, exclusively for the steel plant
(4) Prabhu should tell Saroj that Manoj is unreliable and tardy, and women are unsafe with him.
(5) Prabhu should request Saroj to talk to a few of his colleagues before taking any decision.

Directions for questions 35 to 37: Read the following scenario and answer the THREE questions that follow.

DeepSea is a natural gas extraction company that retrieves natural gas from rock formations beneath the seabed. This gas is then transported through its extensive pipeline network to a bottling plant, located at the sea surface, for processing. The gas in rock formations is pressurized, enabling it to flow to the surface and reach the bottling plant. Yet, excessive pressure can cause bursts in the pipeline, leading to uncontrolled gas release, known as *blowout*. A blowout carries a staggering cost, encompassing not only environmental damage but also reputation loss and financial losses totaling crores of rupees. Additionally, the impacted section of the pipeline requires a complete replacement.

Industry safety regulations divide the pipeline network into three levels: Level 3 is the part under the seabed, Level 2 is the part above the seabed but in the deep sea, while Level 1 is near the surface. The safety regulations require multiple blowout preventer valves, from now on simply referred to as *valves*, to be placed at the three different levels of the pipeline network. The valves are normally kept closed, but when the pressure in any part of the pipeline rises beyond a critical level, nearby valves are opened remotely to release the pressure in a controlled manner to prevent blowout. The number of valves across the pipeline helps localize the pressure release, with a greater number of valves providing a backup mechanism, helping in improving pressure localization in case of a blowout. Given that the valves themselves can occasionally malfunction and not release the pressure when needed, using a higher number of valves ensures that a malfunctioning valve can seek the safety of a nearby functioning valve.

A valve can malfunction in two ways: it may fail to release pressure when needed, as previously mentioned, or it can leak gas during regular operation, resulting in unwanted losses. When a valve malfunctions, it necessitates manual replacement.

In the DeepSea Network, 30% of the valves are located at Level 3, which is the deepest level. The remaining valves are evenly distributed between the top two levels. These valves are critical to ensuring safety and are exclusively supplied by GoValve, a highly specialized manufacturer that holds a monopoly in the country's market.

35. GoValve has recently proposed a maintenance package for the valves to DeepSea, which includes a clause that whenever a valve at Level 3 malfunctions, all valves at that level will be replaced. Accepting the clause will cost a

significant premium. The management of DeepSea have the following pieces of additional information under consideration:

- A. The valves are known to be prone to malfunction.
- B. Any malfunction in one valve often results in leakage from the neighboring valves.
- C. GoValve is ready to negotiate a discount if the clause is accepted.
- D. Replacing the valves at Level 3 is a very difficult job, which is best done by GoValve.
- E. The chances of pressure buildups are higher near the seabed.

Which of the following combinations, of the above pieces of additional information, will help the management of DeepSea the MOST in accepting the clause?

- (1) A, B & D (2) A, B & E (3) A, C & D (4) B, C & D (5) C, D & E

36. A startup, SafeValve, has started importing a technologically superior brand of valves from abroad, which boasts a significant reduction in gas leakage. SafeValve has established a large inventory of these imported valves but is struggling to gain foothold in the local market. An NGO, working for the protection of marine lives, has appealed to DeepSea to replace their existing valves with the product from SafeValve. However, the installation of this new valve will require substantial modification in the pipeline, entailing unknown challenges in installation and maintenance. Which of the following reasons, if TRUE, can DeepSea BEST cite to publicly reject the appeal?

- (1) The new valves cost twice as much as the existing valves.
- (2) SafeValve depends exclusively on imports and may be prone to procurement issues.
- (3) Only some developed countries have mandated the use of the new valves.
- (4) GoValve is a reputed brand and had a partnership with DeepSea for a long time.
- (5) GoValve follows the strictest global industry standards of leakage prevention.

37. A startup, SafeValve, has started importing a technologically superior brand of valves from abroad, which boasts a significant reduction in gas leakage. An update to industry safety regulations has come out, which allows a lower number of valves in a pipeline network, if technologically superior valves, similar to those imported by SafeValve, are used for the entire network.

DeepSea is aware that the more the number of valves, the better is DeepSea's ability to contain blowouts. However, a higher number of valves increases the chance of a leakage. Therefore, DeepSea is contemplating a proposal to reduce the number of valves to almost half, by replacing the existing valves (by GoValve) with the valves sold by SafeValve.

A team, tasked with evaluating the proposal, has made some observations, listed below.

Which of the following observations is the MOST helpful in REJECTING the proposal?

- (1) There is no clear industry standard for the minimum number of valves required at a certain level.
- (2) At Level 1, the chance of a pressure rise is much lesser compared to the other two levels.
- (3) The superiority of the SafeValve products is only in terms of preventing leakage, not blowouts.
- (4) If a GoValve valve is opened to prevent a blowout, the chance of leakage from the valves within a certain distance increases.
- (5) At Level 3, a blowout results in more time consuming and expensive repairs compared to the other two levels.

Directions for questions 38 to 40: Read the following scenario and answer the THREE questions that follow.

ABC Business School was a school with a difference. Regarded as one of the top business schools in western India, but relatively unknown beyond that, the school catered to smaller organizations seeking to hire students for sales and marketing positions, with occasional openings in HR roles. These students were open to secure job opportunities, even if they offered relatively lower salaries. The organizations, that recruited from ABC, did not really care for the talent, but appreciated the students' ability to follow orders without questioning them. The school's strength laid in its alumni, who consistently returned to the institution for recruitment, thereby ensuring the school's continued existence. Given the placement record, the school attracted a specific segment of business school aspirants, who wanted a solid job but were not excited about learning.

38. Recently, some alumni of ABC threatened that their children should be given preference in admissions, or they would withdraw as recruiters. The director was, however, hesitant about allowing alumni to interfere in running the school

because the fairness of the admissions process had earned ABC high respect within the corporate world that recruited from the school.

Which of the following reasons, if true, will BEST help the director NOT to worry about pandering to those alumni?

- (1) ABC has not entertained any requests from the alumni till date.
- (2) The alumni were the reason that ABC was able to attract corporates.
- (3) No business school, in the region, has allowed alumni any say in managing the operations.
- (4) Some of the alumni were regularly teaching as guest faculty in the school.
- (5) The alumni depend upon ABC's success to enhance their employability.

39. Across the country, business schools were ranked by popular magazines. A few business schools in the same region were applying for rankings, hoping that rankings will affect their visibility among corporate houses and recruiters. To achieve a good rank, ABC faculty members, who have primarily focused on teaching thus far, would need to actively engage in research and consulting activities. The director was aware that asking the faculty to switch to research and consulting would not be easy.

Which of the following facts will BEST help the director not to worry about applying for rankings?

- (1) The alumni are aware that ABC offers a retainable talent pool.
- (2) The alumni do not care for the teachers, or classes, in general.
- (3) The alumni do not follow research publications in general.
- (4) ABC could never break into the top 40 ranks in the country when it applied earlier.
- (5) ABC's placements in the previous year were completed in 4 days.

40. A few faculty members complained to the director regarding the lack of attendance and seriousness among many students during classes and exams. The director knew that this had been the case for decades but became more rampant in the last few years. He was also aware that the classes were mostly rituals, conducted to tell the world that ABC believed in education and had little bearing on placements. However, he believed that students must be told to attend classes and take exams with serious attitude.

Which of the following announcements by the director will BEST ensure that faculty stop complaining about student attendance?

- (1) Faculty members, who make classes very engaging, should be felicitated during the convocation.
- (2) Only students, with at least 85 percent class attendance, will participate in placements
- (3) Students should be rewarded for contributing to in-class discussions and learning.
- (4) Students should be asked to pay a monetary penalty for missing classes.
- (5) Students, who attend every class, should be given "thank you" notes from the director.

Directions for questions 41 to 43: Read the following scenario and answer the THREE questions that follow.

Ms. Vineeta Lama, a respected figure in the small town of Jampur, found herself stranded on the road, once again, when her old small hatchback car broke down. Finding herself alone on the deserted road with no one to help, Vineeta, in desperation called Shyam Saigal, the General Manager of Balaji Motors – the only dealership in Jampur that sells Diplomatico cars, the brand that Vineeta drives. Vineeta knew Shyam from her frequent visits for getting her hatchback car serviced. Surprisingly, he arrived within fifteen minutes, accompanied by a mechanic from his dealership. Further, he arranged for the vehicle to be towed and kindly offered Vineeta a ride home. On the way back, he advised Vineeta to exchange her old car with a new Sports Utility Vehicle (SUV) on a good discount from his dealership. He assured her that he would add several additional services to ensure her SUV remained in excellent condition for many years ahead.

41. Due to her old car's frequent breakdowns, Vineeta decided it was a time to replace it. She was afraid whether buying a Diplomatico SUV from Balaji Motors, as suggested by Shyam, will be a right decision for her.

Which of the following pieces of additional information will help her the MOST in taking the right decision?

- (1) In Jampur, SUVs have a 6-month waiting period; however, one red-coloured Diplomatico SUV, not her favourite colour, is available at Balaji Motors.
- (2) Her brother, an SUV enthusiast, staying in a metro city, has advised her to stay away from Diplomatico Cars.
- (3) Jampur, being an old city with congested roads, has a parking problem in many areas.

- (4) A new dealership of Panther Motors, the highest selling car brand in the country, is about to come to the town soon.
- (5) She has no idea which SUV to choose, and she feels that all SUVs are the same.

42. Shyam's satisfaction from meeting the month's quota for selling SUVs turned to dismay when one of his young executives nervously told him that he mistakenly punched an extended warranty for free to Vineeta's purchase contract earlier that morning. This could not be reversed from the company's system and meant a loss of Rs. 19,000 for the dealership. The executive was very sorry and was ready to take accountability. However, the amount was too large to be borne by the executive.

Shyam was not concerned about placing accountability, but rather the recovery of the loss. He was unsure whether he should ask Vineeta for the money.

The following pieces of information are available to Shyam:

- A. Shyam is aware that Vineeta is very happy with the deal he gave her for the car.
- B. Shyam feels that Diplomatico's software system is complicated for new employees, which might have also played a role in the error.
- C. Vineeta has a wide network and can connect Shyam with many potential customers.
- D. Vineeta's brother, a car enthusiast, has enough knowledge of how car dealers operate.
- E. Shyam feels that if he maintains the current sales volume, he might be able to persuade Diplomatico to write off the amount (Rs. 19,000).

Which of the following combinations, of the above pieces of information, will MOST likely stop Shyam from trying to recover the money from Vineeta?

- (1) A. B & E (2) B. A & D (3) C. C & E (4) D. A & B (5) E. C & D

43. Three months passed. While returning from a friend's house, Vineeta's new SUV was hit by another car. Fortunately, she was not injured, but the SUV was badly damaged. Surprisingly, when Vineeta took the car for repairs to Balaji Motors, she was told that the repairs would not cost her anything as the extended warranty on her car covered such accidents. Vineeta could not recall purchasing such a warranty; hence, she contacted Shyam. Shyam informed her that the extended warranty was mistakenly punched into her contract by an executive. As this mistake could not be reversed due to the company's rigid policies, Shyam bore the cost of Rs. 19,000. He further added that Vineeta should consider it a gift from Balaji Motors for purchasing the highest priced Diplomatico SUV.

As Vineeta rode back home, she wondered if she should pay Rs. 19,000 to Shyam since the extended warranty came to her aid that day.

Which of the following is the MOST compelling rationale for Vineeta to justify not paying Rs. 19,000 to Shyam?

- (1) Shyam would have come back to her if he had needed the money.
- (2) The mistake happened three months back and is water under the bridge now.
- (3) She is aware that for expensive SUVs like hers, dealers often offer free extended warranty.
- (4) Had the accident not happened, she would not have been aware of the warranty.
- (5) She paid more for the Diplomatico SUV, compared to the price of a similar SUV from Panther.

Directions for questions 44 to 46: Read the following scenario and answer the THREE questions that follow.

In Symbolis, an upcoming medium sized IT services organization, only 1% of the employees were awarded an annual performance bonus. This annual performance bonus was decided by a committee formed of different functional heads. When Ms. Nalini Kattakayam received the annual bonus for the first time in her five years at Symbolis, Ms. Shalini Sampath, a colleague with seven years of tenure at Symbolis, told Nalini that this annual bonus was less a reflection of Nalini's performance and more a recognition of those who have fostered a strong rapport with the powers that be. Incidentally, Shalini had never received any performance bonus in her tenure at the company.

44. Shalini's comments deeply hurt Nalini, especially since she had always considered Shalini to be a close friend. Nalini felt like declining the bonus, given her respect for and relationship with Shalini.

Which of the following reasons, if true, will BEST dissuade Nalini from declining the bonus?

- (1) In her close group, Nalini is the first person to receive the bonus.
- (2) Very few people, who are not considered loyal, receive the bonus.

- (3) Shalini, good at heart, is known for making insensitive comments.
- (4) Shalini is known for confronting her boss whenever they changed deadlines.
- (5) Shalini's irreverent comment about her previous boss pushed her out of that team.

45. Since receiving the performance bonus, Nalini noticed a change in how her teammates behaved with her; they appeared indifferent towards her. Although there were no major issues, Nalini could not help but sense that her teammates began to perceive her as having a closer relationship with the top brass, following her recent accomplishment. Nalini assumed that her teammates might be influenced by Shalini; consequently, they seemed to be avoiding informal interactions with her.

As Nalini had to rely on the support of her teammates, what could Nalini BEST do to normalize her relationship with them?

- (1) Talk to her teammates regarding their indifference towards her.
- (2) Confront Shalini and ask her to stop spreading rumors.
- (3) Invite her teammates for dinner on a weekend
- (4) Start saying negative things about their bosses to her teammates.
- (5) Do nothing in the hope that things will normalize in time.

46. A significant project recently arrived at Symbolis, and Nalini was chosen to spearhead it. She was given the autonomy to create her own team to collaborate and drive this project to success. Nalini wanted to build a team where each of the team members worked with great comradery. As Shalini had previous experience of working with the client, Nalini offered her to join the team. However, Shalini expressed her willingness to work on the project only on the condition that she would be appointed as a team leader.

Nalini was aware that the client was very difficult to work with. Of the three previous projects with the client, only the one, where Shalini was a team member, was successfully completed.

What should be the BEST course of action for Nalini regarding the inclusion of Shalini in the team?

- (1) Form a team without Shalini and inform her boss about Shalini's demand.
- (2) Ask Shalini to reconsider as this project can be important to both of them.
- (3) Request her boss to order Shalini to join the team.
- (4) Complain about Shalini's attitude to the human resource manager.
- (5) Tell her boss that Shalini should lead the team as she has worked with the client before.

Directions for questions 47 to 49: Read the following scenario and answer the THREE questions that follow.

Mr. Singh lived in a sprawling housing society. He employed two part-time domestic helps, Vimla and Sharda. Vimla was responsible for cleaning and dusting, while Sharda took care of cooking.

Once Sharda fell ill and consequently took leave for three days. When Sharda returned to work, she learned that Mr. Singh's gold ring, a gift from his mother, was missing. Suspecting theft, Mr. Singh had terminated Vimla. Mr. Singh asked Sharda to take additional responsibility of cleaning the house, along with an offer to double her salary. Sharda accepted the offer as her previous two jobs were lost due to frequent health-related absences. She was struggling to make ends meet; this offer would go a long way to help her.

Next day, while cleaning under the dressing table, Sharda found the gold ring. Overjoyed, Mr.

Singh expressed his gratitude by presenting Sharda a reward of one thousand rupees! However, he made no mention of reinstating Vimla.

47. Sharda was contemplating whether she should inform Vimla that she found Mr. Singh's ring.

Which of the following considerations will BEST dissuade Sharda in sharing the information about the ring with Vimla?

- (1) Sharda is not keeping well, and Mr. Singh warned her that her frequent absences could lead to her termination.
- (2) Had Vimla done her job properly, she would have found the ring and avoided this incident.
- (3) Mr. Singh will probably terminate Sharda if he gets to know that she has revealed this information.
- (4) Vimla already knows she has not stolen anything, so telling her will not give her any new information.
- (5) Whenever Sharda was absent, Vimla used to help her by taking over her responsibilities.

48. Two months passed, and owing to Sharda's improved health and dedication, Sharda started working in three more houses. However, Vimla was dismissed from her jobs in two more houses primarily due to the ring incident. News of the discovery of the lost ring had not become public, and Sharda wanted to help Vimla. Sharda is contemplating over possible actions.

Which of the following actions, by Sharda, will BEST help Vimla?

- (1) Inform Vimla that the ring has been found and advise her to demand compensation from Mr. Singh for tarnishing her image.
- (2) Quit the job at Mr. Singh's house and ask him to consider offering that job to Vimla.
- (3) Confront Mr. Singh about concealing the discovery of the lost ring from the housing society residents.
- (4) Inform as many domestic helps in the housing society as possible that she has found the ring.
- (5) Divulge to Vimla's employers in the housing society that she has found the ring.

49. The news of the discovery of the lost ring eventually became public. The domestic helps in the society were chagrined by the treatment meted out to Vimla and the fact that the news of the discovery was not made public immediately. They wanted to ensure that they would not get targeted every time if something goes missing.

Which of the following policy options will BEST minimize the chance of employers Which of the following policy options will BEST minimize the chance of employers

- (1) The domestic workers will undergo a daily search by the security guards when leaving the society.
- (2) If there is a suspicion of theft, the security guards will first conduct a thorough search of the affected house.
- (3) The current address and contact details of all domestic workers should be submitted to the housing society
- (4) When a domestic worker is terminated on suspicion of theft without proof, they will have to be paid at least one month's salary in full.
- (5) When a domestic worker is terminated on suspicion of theft, the employer will have to publicly apologize if the domestic worker can prove their innocence.

VERBAL ABILITY & LOGICAL REASONING

50. Read the following sentences carefully.

- A. Everybody accepts his responsibilities.
- B. Nobody in that group have their reports up to date, as they should have
- C. Either of the boys is acceptable to do the errands.
- D. Both of the mice is underfed.
- E. It is I who am next.
- F. The teacher told he and I to leave early.

Which of the following combinations has all the sentences grammatically CORRECT?

- (1) C, D & F (2) B, D & F (3) A, E & F (4) B, C & D (5) A, C & E

51. Read the following sentences carefully.

- A. I shall be there at about 9:00 a.m.
- B. Keep off of the grass.
- C. My old car was much faster than the new one.
- D. I was angry at my friend.
- E. Rohit is as capable as Virat.

Which of the following combinations has all the INCORRECT sentences?

- (1) A & E (2) B & C (3) D & E (4) C & D (5) A & B

52. Read the following statements and answer the question that follows.

- A. Back then, they were owned by companies and installed on their premises.
- B. Rooms and servers began to replace computer mainframes in the 1990's.

- C. These were supplemented by processors from Intel, which by the mid-2000s translated its dominance of PC semiconductors into a near monopoly of the server market.
- D. They mostly ran on chips made by IBM and HP, the big tech of the day.
- E. Things started to change once again around a decade ago, when Amazon began selling some of its spare server capacity.

Which of the following combinations is the MOST logically ordered?

- (1) E, A, D, C, B (2) B, E, C, D, A (3) E, D, C, B, A (4) A, B, C, D, E (5) B, A, D, C, E

53. Read the following statement carefully and fill up the blanks from the given options.

As _____ evolved and eventually moved to cities, close proximity _____ how we viewed and assessed each _____.

- (1) generations, changed, other (2) civilization, enhanced, situation
- (3) culture, helped, life (4) people, helped, nation
- (5) lives, destroyed, culture

54. Read the following statement carefully.

_____ like a fake can be a sign of _____ and clinging too tightly to what feels like one's authentic self can _____ that growth.

Fill in the blanks meaningfully, in the above statement, from the following options.

- (1) operating, smartness, increase (2) feeling, growth, hinder
- (3) behaving, improvement, support (4) performing, stupidity, change
- (5) acting, progress, enhance

55. Read the following passage and answer the question that follows.

How do we choose one discovery over any other? The physician Lewis Thomas made a choice. He bluntly asserts: "The greatest of all the accomplishments of 20th-century science has been the discovery of human ignorance."

The science writer Timothy Ferris agrees: "Our ignorance, of course, has always been with us, and always will be. What is new is our awareness of it, our awakening to its fathomless dimensions, and it is this, more than anything else, that marks the coming of age of our species."

It is an odd, unsettling thought that the culmination of our greatest century of discovery should be the confirmation of our ignorance. How did such a thing come about?

Which of the following statements can be BEST concluded from the above passage?

- (1) Humans progressed because they knew that they knew very little
- (2) Humans know more when they know they know very little
- (3) Humans became scientists when they realized that they were ignorant
- (4) That they do not know enough make humans seek to know more.
- (5) The realization that humans are ignorant led them to invent new things

56. Read the following passage and answer the question that follows.

That's how life plays out for all of us. We lose some. Like sportspeople, we too pack our gear and go to work. But unlike them, the gaze of the world is not upon us. Most of us do our business in anonymity, very few of us are emotionally wired to the outcomes of our day jobs. We don't come back feeling like winners. Or losers. As sports fans we can summon empathy for those who stretch their bodies and minds to the limit in the pursuit of athletic excellence and provide such joys in the process.

But we will never experience the highs that are their reward. And we will never know the depth of their lows, which are their burden.

Still, no one will know better than Rohit and Dravid that it's already a new day. There might never be a World Cup win for them. But there are loved ones to go to. Life awaits still.

Which of the following statements BEST summarizes the above passage?

- (1) We should treat winning and losing as imposters
- (2) The wins and loss in sports do not exist in other professions.
- (3) We should put ourselves in others shoes rather than judge them for performance
- (4) Life moves on, and as sports fans, we should do too
- (5) Just because we enjoy sports does not mean we understand the sportspersons

57. Read the following paragraphs and answer the question that follows.

Paragraph 1:

Here are some handy rules of thumb. Anyone who calls themselves a thought leader is to be avoided. A man who does not wear socks cannot be trusted. And a company that holds an employee-appreciation day does not appreciate its employees.

Paragraph 2:

It is not just that the message sent by acknowledging staff for one out of 260-odd working days is a bit of a giveaway (there isn't a love-your-spouse day ... for the same reason). It is also that the ideas are usually so tragically unappreciative. You have worked hard all year so you get a slice of cold pizza or a rock stamped with the words "You rock"?

Which of the following BEST describes the relationship of the first paragraph with the second paragraph?

- (1) The first paragraph evokes interest, the second paragraph elaborates
- (2) The first paragraph is humorous, while the second paragraph is sarcastic
- (3) The first paragraph is redundant, in the presence of the second paragraph
- (4) The second paragraph gives evidence to the claims made by the first paragraph
- (5) Without the second paragraph the first paragraph is meaningless

58. Read the following paragraph and answer the question that follows.

Fear is the greatest motivator of all time. Conflict born of fear is behind our every action, driving us forward like the cogs of a clock. Fear is desire's dark dress, its doppelgänger. "Love and dread are brothers," says Julian of Norwich. As desire is wanting and fear is not-wanting, they become inexorably linked; just as desire can be destructive (the desire for power), fear can be constructive (fear of hurting another); fear of poverty becomes desire for wealth.

Which of the following statements can be BEST concluded from the paragraph?

- (1) Fear is a powerful motivator that leads to extraordinary achievements.
- (2) A positive action generally has a foundation of fear underneath.
- (3) Fear paves the way to positive transformation when paired with desire.
- (4) The interplay of fear and desire helps in guiding one's action
- (5) While fear is perceived as negative, it can be a force for good

59. Go through the statements below and answer the question that follows.

- A. Maybe you have survived major trauma and have a hard time feeling safe.
- B. You'll probably discover that your fear and struggles make sense on account of what you've lived through.
- C. Instead of beating yourself up for reacting in ways you don't understand, you can develop compassion for yourself and what you've been through.
- D. Perhaps you have experienced a sudden death, and you are often anxious about the health of your loved ones.
- E. You may also find out that you have more strength than you knew, the same strength that has sustained you this far....

Which of the following combinations is the MOST logically ordered?

- (1) E, D, C, B, A
- (2) E, B, A, D, C
- (3) B, A, D, C, E
- (4) E, A, D, C, B
- (5) D, C, B, A, E

60. Read the following paragraph and answer the question that follows.

You may accumulate a vast amount of knowledge but it will be of far less value to you than a much smaller amount if you have not thought it over for yourself; because only through ordering what you know by comparing every truth with every other truth can you take complete possession of your knowledge and get it into your power.

Based on the above information, which of the following statements MUST be true?

- (1) If she has mastered the knowledge, she might have reflected on the information.
- (2) If she wants to master knowledge, she must reflect on the information
- (3) If she is a master of knowledge, it is because she is a reflector of information
- (4) If she reflects on the information, she will master the knowledge.
- (5) If she has not mastered knowledge, she must have not reflected on information

Directions for questions 61 and 62: Read the following passage and answer the TWO questions that follow.

But as the behavioral economists like to remind us, we are already prone to all sorts of reductions as a species. It's not just the scientists. We compress complex reality down into abbreviated heuristics that often work beautifully in everyday life for high-frequency, low significance decisions. Because we are an unusually clever and self-reflective species, we long ago realized that we needed help overcoming those reductive instincts when it really matters. And so we invented a tool called storytelling. At first, some of our stories were even more reductive than the sciences would prove to be: allegories and parables and morality plays that compressed the flux of real life down to archetypal moral messages. But over time the stories grew more adept at describing the true complexity of lived experience, the whorls and the threadlike pressures. One of the crowning achievements of that growth is the realist novel. That, of course, is the latent implication of Prince Andrei's question: "innumerable conditions made meaningful only in unpredictable moments" would fare well as a description of both War and Peace and Middlemarch, arguably the two totemic works in the realist canon. What gives the novel the grain of truth lies precisely in the way it doesn't quite run along the expected grooves, the way it dramatizes all the forces and unpredictable variables that shape the choices humans confront at the most meaningful moments of their lives.

When we read those novels—or similarly rich biographies of historical figures—we are not just entertaining ourselves; we are also rehearsing for our own real-world experiences....

61. Which of the following is the BEST interpretation regarding reductive instincts?

- (1) Reductive instincts tell us to reduce every situation to a heuristic
- (2) Reductive instincts led to compression of complex reality to moral messages
- (3) Reductive instincts can help us in handling uncertainty
- (4) Reductive instincts have to be overcome for survival in the real world.
- (5) After the invention of storytelling, humans have overcome their reductive instincts.

62. Why would a realist novel consist of "innumerable conditions made meaningful only in unpredictable moments?"

- (1) To engage the reader with realism and fantasy at the same time.
- (2) To keep the reader engaged till the end of the novel.
- (3) To bring in as much content as possible without making it seem forced
- (4) To showcase unexpected complexity while making it seem relevant in the given context.
- (5) To show to the reader that realist novel does not work on expected lines

Directions for questions 63 to 65: Read the following passage and answer the THREE questions that follow.

If we imagine the action of a vaccine not just in terms of how it affects a single body, but also in terms of how it affects the collective body of a community, it is fair to think of vaccination as a kind of banking of immunity. Contributions to this bank are donations to those who cannot or will not be protected by their own immunity. This is the principle of herd immunity, and it is through herd immunity that mass vaccination becomes far more effective than individual vaccination.

Any given vaccine can fail to produce immunity in an individual, and some vaccines, like the influenza vaccine, are less effective than others. But when enough people are vaccinated with even a relatively ineffective vaccine, viruses have trouble moving from host to host and cease to spread, sparing both the unvaccinated and those in whom vaccination has

not produced immunity. This is why the chances of contracting measles can be higher for a vaccinated person living in a largely unvaccinated community than they are for an unvaccinated person living in a largely vaccinated community. The unvaccinated person is protected by the bodies around her, bodies through which disease is not circulating. But a vaccinated person surrounded by bodies that host disease is left vulnerable to vaccine failure or fading immunity. We are protected not so much by our own skin, but by what is beyond it. The boundaries between our bodies begin to dissolve here. Donations of blood and organs move between us, exiting one body and entering another, and so too with immunity, which is a common trust as much as it is a private account. Those of us who draw on collective immunity owe our health to our neighbors.

63. Based on the passage, which of the following CANNOT be concluded?

- (1) A vaccinated person may get infected if her surroundings are largely unvaccinated
- (2) Collective immunity protects those with compromised immune systems
- (3) A vaccine cannot guarantee immunity in an individual
- (4) Our survival, as a community, is largely based on herd immunity.
- (5) Even, relatively, ineffective vaccines can stop the spread of viruses if enough people are vaccinated.

64. Why does the author think about vaccination as a “banking of immunity?”

- (1) Because it creates a reserve of immunity within a person’s immune system
- (2) Because different vaccines contribute to a diverse portfolio of immune defences
- (3) Because when somebody is vaccinated, it is a deposit of protection against a particular disease.
- (4) Because it is a way to mitigate health risks for those who may not have access to vaccination
- (5) Because it is like providing a safety net for those who are more vulnerable to diseases.

65. Based on the last paragraph of the passage, which of the following would the author BEST agree with?

- (1) In any community, immunity is transactional
- (2) It is important to express gratitude to those who contribute to the herd immunity by getting vaccinated
- (3) Immunity of a community is interconnected, and everyone plays a role to keep each other healthy.
- (4) It is an ethical obligation of individuals to get vaccinated for the greater good
- (5) In times of health crises, communities should come together to support and protect each other.

Directions for questions 66 to 68: Read the following passage and answer the THREE questions that follow.

Because it’s so easy to judge the idiocy of others, it may be sorely tempting to think this doesn’t apply to you. But the problem of unrecognized ignorance is one that visits us all. And over the years, I’ve become convinced of one key, overarching fact about the ignorant mind. One should not think of it as uninformed. Rather, one should think of it as misinformed.

An ignorant mind is precisely not a spotless, empty vessel, but one that’s filled with the clutter of irrelevant or misleading life experiences, theories, facts, intuitions, strategies, algorithms, heuristics, metaphors, and hunches that regrettably have the look and feel of useful and accurate knowledge. This clutter is an unfortunate by-product of one of our greatest strengths as a species. We are unbridled pattern recognizers and profligate theorizers. Often, our theories are good enough to get us through the day, or at least to an age when we can procreate. But our genius for creative storytelling, combined with our inability to detect our own ignorance, can sometimes lead to situations that are embarrassing, unfortunate, or downright dangerous—especially in a technologically advanced, complex democratic society that occasionally invests mistaken popular beliefs with immense destructive power. As the humorist Josh Billings once put it, “It ain’t what you don’t know that gets you into trouble. It’s what you know for sure that just ain’t so.” (Ironically, one thing many people “know” about this quote is that it was first uttered by Mark Twain or Will Rogers—which just ain’t so.)

Because of the way we are built, and because of the way we learn from our environment, we are all engines of misbelief. And the better we understand how our wonderful yet kludgeridden, Rube Goldberg engine works, the better we—as individuals and as a society—can harness it to navigate toward a more objective understanding of the truth.

66. Which of the following statement is NOT true about an ignorant mind?

- (1) An ignorant mind often fuels scepticism
- (2) An ignorant mind theorizes without robust evidence

- (3) An ignorant mind is often filled with unfounded and misguided distractions
- (4) An ignorant mind succumbs to illusionary pattern detection
- (5) An ignorant mind is unaware of its own limitations

67. Based on the passage, what does the author BEST mean when he says, “we are all engines of misbelief?”

- (1) We are prone to holding beliefs that are not necessarily true
- (2) Our brains are wired with certain heuristics that can lead to systematic errors in judgement
- (3) We are naturally inclined to form, and often share, misleading and inaccurate beliefs
- (4) We are always fuelled by our ignorance to spread information
- (5) Driven by misbelief, we blend our creativity and ignorance.

68. With which of the following statements will the author agree the MOST?

- (1) The more we are sure of something, the more we are wrong about it.
- (2) The more we are sure of something, the more we are wrong about it.
- (3) Our desire to see patterns in everything makes us unable to detect misbeliefs in others.
- (4) We must be sceptical of the beliefs we have, regardless how true they seem to us
- (5) We must try not to see patterns in everything that we observe

Directions for questions 69 and 70: Read the following passage and answer the TWO questions that follow.

Beauty has an aesthetic, but it is not the same as aesthetics, not when it can be embodied, controlled by powerful interests, and when it can be commodified. Beauty can be manners, also a socially contingent set of traits. Whatever power decides that beauty is, it must always be more than reducible to a single thing. Beauty is a wonderful form of capital in a world that organizes everything around gender and then requires a performance of gender that makes some of its members more equal than others.

Beauty would not be such a useful distinction were it not for the economic and political conditions. It is trite at this point to point out capitalism, which is precisely why it must be pointed out. Systems of exchange tend to generate the kind of ideas that work well as exchanges. Because it can be an idea and a good and a body, beauty serves many useful functions for our economic system. Even better, beauty can be political. It can exclude and include, one of the basic conditions of any politics. Beauty has it all. It can be political, economic, external, individualized, generalizing, exclusionary, and perhaps best of all a story that can be told. Our dominant story of beauty is that it is simultaneously a blessing, of genetics or gods, and a site of conversion. You can become beautiful if you accept the right prophets and their wisdoms with a side of products thrown in for good measure. Forget that these two ideas—unique blessing and earned reward—are antithetical to each other. That makes beauty all the more perfect for our (social and political) time, itself anchored in paradoxes like freedom and property, opportunity and equality.

69. Based on the passage, which of the following CANNOT be inferred about beauty?

- (1) Based on the passage, which of the following CANNOT be inferred about beauty?
- (2) Different powers and influences delineate beauty for us.
- (3) The beautiful does not define the standards of beauty
- (4) Beauty has become an aspirational good
- (5) Beauty is no longer an abstract concept

70. Based on the passage, which of the following BEST explains beauty to be simultaneously a “blessing” and a “site of conversion?”

- (1) Though beauty is a unique blessing, one can become beautiful by imitating beautiful people.
- (2) When properly communicated people will believe anything
- (3) Both are narratives, with one supporting the other
- (4) A blessing, when sought, results in a provider of the blessing, in a capitalistic society
- (5) Because beauty is a blessing everyone wants to possess it by converting to the standards.

Directions for questions 71 to 73: Read the following passage and answer the THREE questions that follow.

What I call fast political thinking is driven by simplified moral frames. These moral frames give us the sense that those who agree with us have the right answer, while those who disagree are unreasonable, or worse.

Each moral frame sets up an axis of favorable and unfavorable. Progressives use the oppressor-oppressed axis. Progressives view most favorably those groups that can be regarded as oppressed or standing with the oppressed, and they view most unfavorably those groups that can be regarded as oppressors. Conservatives use the civilization-barbarism axis. Conservatives view most favorably the institutions that they believe constrain and guide people toward civilized behavior, and they view most unfavorably those people who they see as trying to tear down such institutions. Libertarians use the liberty-coercion axis. Libertarians view most favorably those people who defer to decisions that are made on the basis of personal choice and voluntary agreement, and they view most unfavorably those people who favor government interventions that restrict personal choice.

If you have a dominant axis, I suggest that you try to learn the languages spoken by those who use the other axes. Don't worry—learning other languages won't make it easy for others to convert you to their point of view. By the same token, it will not make it easy to convert others to your point of view. However, you may become aware of assumptions your side makes that others might legitimately question.

What learning the other languages can do is enable you to understand how others think about political issues. Instead of resorting to the theory that people with other views are crazy or stupid or evil, you may concede that they have a coherent point of view. In fact, their point of view could be just as coherent as yours. The problem is that those people apply their point of view in circumstances where you are fairly sure that it is not really appropriate.

Consider that there may be situations in which one frame describes the problem much better than the others. For example, I believe that the civil rights movement in the United States is best described using the progressive heuristic of the oppressed and the oppressor. In the 1950s and the early 1960s, the people who had the right model were the people who were fighting for black Americans to have true voting rights, equal access to housing, and an end to the Jim Crow laws. The civilization-barbarism axis and the liberty-coercion axis did not provide the best insight into the issue....

71. Which of the following BEST describes the civilization-barbarism axis?

- (1) Every society has to have a harmonious mix of civilized and the barbaric for it to survive.
- (2) Government should play a very heavy role in maintaining law and order.
- (3) The way we are trained to behave affects our peace in life.
- (4) Some people are barbaric and should be restrained from public life.
- (5) It is how you behave, not who you are, that makes you acceptable.

72. Which of the following BEST explains the author's usage of the term *moral frames*?

- (1) A frame is a belief and cannot be rationally explained
- (2) The frames give those who believe in them the right to question others' behaviours
- (3) The frames define what the believer believes as right or wrong
- (4) What is right to the believer is wrong to those who do not share that belief.
- (5) It makes easy for the believer to declare others as wrong

73. Which of the following can BEST be concluded from the above passage?

- (1) Issues can be solved by looking at them from the right axis and questioning the assumptions.
- (2) Knowing why you think the way you think, enables you to understand others' perspectives.
- (3) The assumptions we hold leads to our dominant axis.
- (4) Most controversial issues in the world can be simplified into three axes
- (5) Most problems in the world are because of applying the wrong axis to a particular problem.

Directions for questions 74 to 75: Read the following poem and answer the TWO questions that follow.

In the darkened room
a woman
cannot find her reflection in the mirror

waiting as usual
 at the edge of sleep
 In her hands she holds
 the oil lamp
 whose drunken yellow flames
 know where her lonely body hides

74. Which of the following statements BEST conveys the theme of the poem?

- (1) The poem laments the suffering and frustration of a woman
- (2) The poem celebrates the woman's futile and meaningless life
- (3) The poem explores the quality of life of a woman
- (4) The poem revolves around the woman's feeling of alienation
- (5) The poem revolves around a woman whose liberty has been throttled

75. What do the lines "the drunken yellow flames/know where her lonely body hides" BEST represent?

- (1) The lines represent flames as distorted memories that preserve her identity
- (2) The lines represent flames as turbulent emotions of a nameless woman.
- (3) The lines represent flames as her desperate pursuit for her lost self
- (4) The lines represent flames as forces that are aware of her solitude
- (5) The lines represent flames that highlight the location of her body

GENERAL KNOWLEDGE

76. Why has Dr. Akshata Krishnamurthy been in the news recently?

- (1) She is the first Indian citizen to lead the Big Bang Observatory
- (2) She is the first Indian citizen to make a major breakthrough in the genome sequencing of Jamun
- (3) She is the first Indian citizen to command a rover mission on Mars
- (4) She is the first Indian citizen to be heading the pharmaceutical giant Pfizer.
- (5) She is the first Indian citizen appointed to the Laser Interferometer Gravitational-Wave Observatory

77. Match the following national capitals with their respective countries/territories.

Country/ Territory	National Capital
(a) Kenya	(i) Vaduz
(b) Paraguay	(ii) Nairobi
(c) Guinea	(iii) Asuncion
(d) Liechtenstein	(iv) Conakry

- (1) a-ii, b-iii, c-iv, d-i
- (2) a-ii, b-iii, c-i, d-iv
- (3) a-ii, b-iv, c-iii, d-i
- (4) a-ii, b-i, c-iii, d-iv
- (5) a-ii, b-iv, c-i, d-iii

78. The movie *Oppenheimer* was directed by

- (1) Steven Spielberg
- (2) Greta Gerwig
- (3) Christopher Nolan
- (4) Quentin Tarantino
- (5) Zack Snyder

79. Arrange the following historic capital cities of Indian kingdoms in the order of their geographic locations, from north to south.

(a) Kannauj (b) Karur (c) Pataliputra (d) Rajahmundry

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

80. Which two teams competed in the final match of the Women's Premier League (WPL) 2023, held on March 26, 2023 in Mumbai?

- (1) UP Warriorz & Delhi Capitals
- (2) Delhi Capitals & Gujarat Giants

- (3) Delhi Capitals & Mumbai Indians (4) Gujarat Giants & Delhi Capitals
(5) Royal Challengers Bangalore & Mumbai Indians

81. Which rocket was used to launch Aditya-L1?

- (1) GSLV-F12 (2) PSLV-C57 (3) LVM3-M4 (4) TERLS (5) NGLV

82. In November 2023, which state government declared a fish named "Ghol" as the state fish?

- (1) Haryana (2) Uttar Pradesh (3) Bihar (4) Gujarat (5) Maharashtra

83. What is the common terminology used to describe the following applications: ChatGPT, Google Bard, Chatsonic?

- (1) News Aggregators (2) UPI Applications (3) Dating Tools
(4) Generative AI Tools (5) Gaming Applications

84. What is Nabanno?

- (1) It is the harvest festival of Bengal and Bangladesh (2) It is a perennial river that flows in the Deccan
(3) It is a town close to Nabarno-Karabakh. (4) It is another word for "great news."
(5) It is a dancing festival in Jammu and Kashmir.

85. Which country has formally pulled out of "Treaty on Conventional Armed Forces in Europe"?

- (1) Israel (2) Turkey (3) Italy (4) Russia (5) Germany

86. Which company has launched a dedicated air cargo service in India to speed up deliveries?

- (1) Jiomart (2) Flipkart (3) Snapdeal (4) Tata Cliq (5) Amazon

87. What is X-37B?

- (1) The U.S. military plane that has gone to the space (2) The new electric vehicle to be launched by Tesla
(3) The name of India's Jupiter mission (4) The newest variant of COVID-19 virus.
(5) The name of the youngest kid of Elon Musk.

88. Which of the following Indian states does the River Ganges not flow through?

- (1) Jharkhand (2) Uttarakhand (3) Bihar (4) Uttar Pradesh (5) Haryana

89. Claudia Dale Goldin was awarded the Nobel Prize in Economics in 2023 in recognition of her groundbreaking research in the field of:

- (1) Human Trafficking (2) Unemployment in Global South (3) Behavioural Economics
(4) Women in the Work Force (5) Poverty in Africa

90. Which of the following governors-general of India introduced the policy of "doctrine of lapse"?

- (1) Lord Reading (2) Lord Curzon (3) Lord Dalhousie
(4) Lord Mountbatten (5) Lord Wellesley

91. What is the name of Air India's Artificial Intelligence-powered chat assistant that introduced a generative AI virtual agent?

- (1) Niya (2) Frenz (3) Maharaja (4) AirBuddy (5) Sathi

92. Which of the following countries has NOT been invited to join the BRICS in the BRICS' expansion plan for 2024?

- (1) Pakistan (2) Ethiopia (3) Iran (4) Saudi Arabia (5) Egypt

93. Which city hosted the recently concluded Asian Games 2022 (which happened in 2023)?

- (1) Incheon (2) Busan (3) Jakarta (4) Hangzhou (5) Guangzhou

94. Who received the Nobel Peace Prize in 2023?
 (1) Shirin Ebadi (2) Maria Ressa (3) Narges Mohammadi
 (4) Center for Civil Liberties (5) Barack Obama
95. Which Indian city set a world record by illuminating 22.23 lakh earthen lamps on the eve of Diwali 2023?
 (1) Udupi (2) Prayagraj (3) Rameswaram (4) Ayodhya (5) Varanasi
96. Arrange the following famous battles in the order of their occurrence:
 (a) Battle of the Hydaspes
 (b) First Battle of Tarain
 (c) Battle of Khanwa
 (d) Battle of Talikota
 (e) Battle of Buxar
 (1) (a)-(e)-(b)-(c)-(d) (2) (a)-(b)-(c)-(d)-(e) (3) (a)-(b)-(d)-(c)-(e)
 (4) (a)-(c)-(b)-(d)-(e) (5) (a)-(c)-(d)-(b)-(e)
97. Matthew Perry, who died in 2023, was famously known for playing which character in the sitcom called *Friends*?
 (1) Chandler Bing (2) Raymond Holt (3) Ross Geller
 (4) Monica Geller (5) Joey Tribbiani
98. Which of the following prefectures of Japan was MAJORLY affected by an earthquake on January 1, 2024?
 (1) Osaka (2) Hiroshima (3) Fukushima (4) Tokyo (5) Ishikawa
99. Match the following books with their authors
- | Books | Authors |
|-------------------------------------|-------------------------|
| (a) Adventures of Tom Sawyer | (i) Charles Dickens |
| (b) Around the world in eighty days | (ii) Arthur Conan Doyle |
| (c) Gulliver's Travels | (iii) Jules Veme |
| (d) Adventures of Sherlock Holmes | (iv) Mark Twain |
| (e) David Copperfield | (v) Jonathan Swift |
- (1) a-iv, b-iii, c-v, d-ii, e-i (2) b-iv, a-iii, c-v, d-ii, e-i (3) e-iv, b-iii, d-v, c-ii, a-i
 (4) a-iv, c-iii, e-v, d-ii, b-i (5) a-iv, c-iii, b-v, d-ii, e-i
100. Which of the following years is NOT a leap year?
 (1) 2000 (2) 1900 (3) 1896 (4) 1924 (5) 2024

ANALYTICAL ESSAY WRITING

101. Tech predictions often fail not because of wrong models or a lack of imagination, but due to lack of humility in admitting our uncertainty about the future. (Maximum 250 words)
102. Implementing more stringent regulations on social media platforms is crucial to effectively combat the proliferation of fake news. . (Maximum 250 words)
103. "Things which matter most must never be at the mercy of things which matter least. (Maximum 250 words)

XAT 2024 Answer Key

QADI				DM				VALR			
Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.	Q.	Ans.
1	1	21	3	29	2	49	1	50	5	70	4
2	3	22	4	30	5			51	5	71	5
3	4	23	1	31	3			52	5	72	3
4	5	24	5	32	5			53	1	73	2
5	5	25	2	33	5			54	2	74	4
6	3	26	1	34	5			55	4	75	1
7	3	27	2	35	1			56	5		
8	3	28	3	36	5			57	1		
9	4			37	5			58	5		
10	2			38	5			59	3		
11	2			39	1			60	2		
12	1			40	2			61	4		
13	1			41	2			62	4		
14	3			42	3			63	4		
15	1			43	3			64	5		
16	3			44	3			65	3		
17	2			45	1			66	1		
18	2			46	2			67	3		
19	2			47	3			68	4		
20	1			48	5			69	1		

GK			
Q.	Ans.	Q.	Ans.
1	3	21	2
2	1	22	1
3	3	23	5
4	3	24	1
5	3	25	2
6	2		
7	4		
8	4		
9	1		
10	4		
11	5		
12	1		
13	5		
14	4		
15	3		
16	3		
17	1		
18	4		
19	3		
20	4		