SBI PO Prelims Memory Based Paper (Held On: 8 March 2025 Shift 2) (Previous Year Paper)

SBI Probationary Officer (PO) • 2025 • 100 questions • 60 minutes • Answer key and solutions

Take this paper as a timed mock test

Practise under exam conditions, then review your answers after you submit.

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ENGLISH LANGUAGE

Q1. A sentence/a part of the sentence is underlined. Five alternatives are given to the underlined part which will improve the meaning of the sentence. Choose the correct alternative. In case no improvement is needed, click the option corresponding to "No improvement".

She really enjoyed the thrill of the open road, and her husband did so.

(a) So did her husband
(b) His husband did so
(c) Her husband neither did so
(d) Neither her husband so
(e) No Improvement

Q2. A sentence/a part of the sentence is underlined. Five alternatives are given to the underlined part which will improve the meaning of the sentence. Choose the correct alternative. In case no improvement is needed, click the option corresponding to "No improvement".

Fewer people attend a church regularly now than twenty years ago.

(a) Fewer people attend church
(b) Less people attend church
(c) Lesser people attend church
(d) The few people attend a church
(e) No improvement

Q3. Direction: A sentence/a part of the sentence is underlined. Five alternatives are given to the underlined part which will improve the meaning of the sentence. Choose the correct alternative. In case no improvement is needed, click the option corresponding to “No improvement”.

His gestures were more of a turn up than I expected.

(a) Turn on
(b) Turn down
(c) Turn in
(d) Turn back
(e) No improvement

Q4. In the following question, two columns are given, containing three phrases each. A phrase from the first column may or may not connect with a phrase from the second column to make a grammatically and contextually correct sentence. There are five options, four of which display the sequence(s) in which the phrases can be joined to form a correct sentence. If none of the phrases make a correct sentence, mark ‘None of these’ as your answer.

Column 1	Column 2
A. Rapid action to reduce greenhouse gas emissions this decade will effectively flatten	D. inhabitants having munched on squash and cassava more than 10,000 years ago.

B. The Amazon basin was a hotspot for the early cultivation of plants, with	E. identify the plants that lived in a particular place in the past.
C. Phytoliths are plant microfossils which can be used to	F. the curve of species at risk.

(a) B-D and C-F
(b) A-F
(c) C-D
(d) A-E
(e) None of these.

Q5. In the following question, two columns are given, containing three phrases each. A phrase from the first column may or may not connect with a phrase from the second column to make a grammatically and contextually correct sentence. There are five options, four of which display the sequence(s) in which the phrases can be joined to form a correct sentence. If none of the phrases make a correct sentence, mark 'None of these' as your answer.

Column 1	Column 2
A. Campaigners have welcomed the relaxation of immigration restrictions by governments	D. signed up to work.
B. In Germany, hundreds of foreign doctors and nurses who don't yet have licenses to practice	E. across Europe and the Americas to allow doctors.
C. Refugees and other migrants are exposed	F. to great risks as a result of the pandemic.

(a) C-F and B-E
(b) A-D and B-F
(c) B-D and A-F
(d) C-E and A-F
(e) None of these

Directions

Directions: In the following passage, some words have been deleted. Select the most appropriate option to fill in each blank.

Superfoods are nutrient-rich foods that offer multiple health benefits. They are an essential part of a balanced diet and help in maintaining overall __ (A) and well-being. Different superfoods provide a variety of nutrients, including vitamins, minerals, antioxidants, and (B). For instance, berries are packed with antioxidants that help combat oxidative stress and inflammation. On the other hand, seeds like chia and flax are rich in omega-3 fatty acids, which are crucial for maintaining heart (C). Another group of superfoods includes leafy greens such as spinach and kale, which are excellent sources of vitamins A, C, and K, as well as iron and calcium. These nutrients are vital for supporting (D), healthy skin, and strong bones. Additionally, nuts like almonds and walnuts provide proteins and good fats that help in (E) energy levels throughout the day. Including a variety of superfoods in your diet can significantly boost your nutritional intake. However, it is essential to remember that balance is key, and no single food can provide all the __ (F) the body needs. Therefore, it's imperative to consume a diverse mix of foods to achieve optimal health.

Q6. Which of the following is the most appropriate option to fill in the blank labelled as (A)?

(a) fatigue
(b) health
(c) digestion
(d) activity
(e) appetite

Q7. Which of the following is the most appropriate option to fill in the blank labelled as (B)?

(a) fibers
(b) flavours
(c) proteins
(d) calories
(e) sugars

Q8. Which of the following is the most appropriate option to fill in the blank labelled as (C)?

(a) endurance
(b) failure
(c) flu
(d) health
(e) fatigue

Q9. Which of the following is the most appropriate option to fill in the blank labelled as (D)?

(a) immunity
(b) obesity
(c) vision
(d) intelligence
(e) behaviour

Q10. Which of the following is the most appropriate option to fill in the blank labelled as (E)?

(a) desiring
(b) boosting
(c) draining
(d) reducing
(e) storing

Q11. Which of the following is the most appropriate option to fill in the blank labelled as (F)?

(a) nutrients
(b) varieties
(c) textures
(d) tastes
(e) flavours

Q12. Directions: In the given question below, four sentences are given that may or may not contain an error. Choose the one that is grammatically as well as contextually correct and meaningful. If all the sentences are correct, mark "All are correct" as your answer.

(a) Try to eat every of fresh fruit.
(b) Kamya thinks she is more powerful than Kashish.
(c) Riya is driving quickly when the traffic police stopped her.
(d) It was a honour to be invited here today.
(e) All are correct

Q13. Directions: In each of the questions below, five sentences are given that may or may not contain an error. Choose the one that is grammatically or contextually incorrect and meaningless. If all the sentences are correct, mark 'All are correct as your answer'.

(a) The team, along with the coach, was celebrating the victory.
(b) Each of the boys has submitted his assignments on time.
(c) Neither the rain nor the wind were enough to cancel the event.
(d) Many a person believes that hard work always pays off.
(e) All are correct.

Q14. Directions: In each of the questions below, four sentences are given that may or may not contain an error. Choose the one that is grammatically as well as contextually correct and meaningful. If all the sentences are correct, mark 'All are correct as your answer'.

(a) She walked twelve miles which are really a great distance for a woman like her who is not only old but also ill.
(b) The information presented in the most recent reports indicate that turbulent times lie ahead for those who have invested only in Small Cap stocks.
(c) He was promoted in rank and received a free gift of the castle and isle of Indre near Nantes.
(d) Knowledge of at least four languages is required to pass the examination.
(e) All are correct.

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Q15. Directions: In each of the questions below, five sentences are given that may or may not contain an error. Choose the one that is grammatically or contextually incorrect and meaningless. If all the sentences are correct, mark 'All are correct as your answer'.

(a) The data shows a significant increase in customer satisfaction.
(b) The company's new policy affects all employees immediately.
(c) There is less people attending the lecture than expected.
(d) She runs more quickly than anyone else on the team.
(e) All are correct.

Q16. Directions: In each of the questions below, four sentences are given that may or may not contain an error. Choose the one that is grammatically as well as contextually correct and meaningful. If all the sentences are correct, mark 'All are correct as your answer'.

(a) The doctor, as well as the committee members, are excited.
(b) Locally produced valuables have the advantage of shorter supply chains.
(c) Resorting to violence is not the best solution to a argument.
(d) Beside ability, the other essential element in political success is luck.
(e) All are correct.

Directions

Read the passage given below and then answer the questions given below the passage.

In recent years, global food supply chains have faced unprecedented challenges, contributing to inflationary pressures that have affected economies worldwide. The intricate network that ensures the delivery of food from farms to tables has been disrupted by a multitude of factors. These disturbances have cast a dark shadow over the global food market, complicating efforts to stabilize prices and ensure accessibility. One of the primary causes of food supply disturbances is extreme weather conditions. Climate change has led to unpredictable and severe weather patterns, resulting in poor crop yields. Droughts, floods, and other natural disasters have significantly impacted agricultural productivity, reducing the supply of key staples such as wheat, rice, and maize. This reduction in supply has inevitably pushed prices upward, exacerbating food inflation. Another critical factor contributing to food supply chain disruptions is the ongoing COVID-19 pandemic. The pandemic has created numerous logistical challenges, including labour shortages and transport restrictions. Many countries have struggled to maintain their food distribution networks as lockdowns and health regulations have led to delays and higher transportation costs. Furthermore, border closures and trade restrictions have hindered the free flow of goods, causing regional supply imbalances and further escalating prices.

On a global scale, supply chain disruptions are not the only challenges. Rising energy prices have also played a significant role in food inflation. The cost of fuel is a major component of agricultural production and transportation expenses. As fuel prices continue to climb, so do the costs of _____ food products. This increase in operational costs is typically passed on to consumers, leading to higher food prices at retail outlets. Governments and international bodies are working tirelessly to address these issues and mitigate the impact on food prices. Various strategies are being considered and implemented to handle the situation, such as improving agricultural practices, investing in climate-resilient crops, and enhancing infrastructure to ensure more efficient distribution channels. Additionally, policymakers are focusing on measures to support farmers and reduce their financial burden, an effort critical to stabilizing the food supply chain in the long run. Despite these efforts, it is clear that the road ahead remains challenging. Experts warn that food inflation may continue for the foreseeable future unless comprehensive and coordinated actions are taken globally. The interplay of climate change, pandemic-related disruptions, and rising energy costs creates a complex scenario that requires robust and adaptive solutions to ensure food security and stabilize markets. Thus, global cooperation and innovative strategies are essential in addressing the dark clouds hovering over the world's food supply.

Q17. According to the passage, what is one of the primary causes of global food supply disturbances?

(a) Political instability
(b) Extreme weather conditions
(c) Technological failures
(d) Urbanization
(e) Economic recession

Q18. The passage states that the ongoing COVID-19 pandemic has created logistical challenges including:

(a) Overproduction of food
(b) Decrease in consumer demand
(c) Labour shortages and transport restrictions
(d) Increase in agricultural productivity
(e) Improvement in fuel efficiency

Q19. According to the passage, which crops were specifically mentioned as being affected by extreme weather conditions?

(a) Barley, soybeans, and potatoes
(b) Corn, oats, and rye
(c) Wheat, rice, and maize
(d) Sugarcane, citrus fruits, and vegetables
(e) Beans, lentils, and nuts

Q20. According to the passage, which of the following statements is correct?

A) Climate change has led to unpredictable and severe weather patterns.
B) Rising healthcare costs have significantly contributed to food inflation.
C) Fuel prices directly impact the costs of agricultural production and transportation.

(a) Only A
(b) Only B
(c) Only C
(d) A and C
(e) B and C

Q21. It can be inferred from the passage that:

(a) Governments are indifferent to the challenges in the global food supply chain.
(b) Stabilizing food prices requires both immediate and long-term strategies.
(c) The steps taken so far have completely solved the food supply chain disruptions.
(d) Climate change has no significant effect on food production.
(e) Rising energy prices are unrelated to food inflation.

Q22. What will fit in the blank taken from the passage: ‘As fuel prices continue to climb, so do the costs of _____ food products.’

(a) Quality controlling
(b) Improving and marketing
(c) Harvesting and processing
(d) Growing and storing
(e) Producing and delivering

Q23. Which of the following words is similar in meaning to "dark" in the context of the passage?

(a) Bright
(b) Bleak
(c) Light
(d) Transparent
(e) Cheerful

Q24. Which of the following words is similar in meaning to "continue" in the context of the passage?

(a) Stop
(b) Persist
(c) Cease
(d) Interrupt
(e) Break

Q25. Which of the following words is similar in meaning to "handled" in the context of the passage?

(a) Ignored
(b) Mismanaged
(c) Addressed
(d) Overlooked
(e) Neglected

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Q26. Direction: Evaluate the following word, accompanied by three sentences containing it. Determine the sentence(s) that accurately convey the meaning of the given word.

Rage

A. The rage against the new policy was evident in the protesters' shouts.

B. After learning about his promotion, his heart was filled with rage.

C. This fashion trend is all the rage amongst teenagers this season.

(a) Only A
(b) Both A & C
(c) Only B
(d) All A, B & C
(e) None of these

Q27. Direction: Evaluate the following word, accompanied by three sentences containing it. Determine the sentence(s) that accurately convey the meaning of the given word.

Manage

A. She found it difficult to manage her time while working two jobs.

B. The company hired a new CEO to manage up the profit reports.

C. After the accident, it was hard for him to manage his emotions.

(a) Only A
(b) Both A & C
(c) Only C
(d) All A, B & C
(e) None of these

Q28. Direction: Evaluate the following word, accompanied by three sentences containing it. Determine the sentence(s) that accurately convey the meaning of the given word.

Rise

A. The sun began to rise over the horizon, promising a new day.

B. Her determination allowed her to rise up the book to the top of her class.

C. They experienced a significant rise in their technological capabilities.

(a) Only A
(b) Both A & C
(c) Only C
(d) All A, B & C
(e) None of these

Q29. A sentence is given with three words marked as (A), (B), and (C). These words may or may not be placed in their places. Four options with different arrangements of these words are given. Mark the option with the correct arrangement as the answer. If there is no change required, mark 'No rearrangement required' as your answer.

Team management is the task (A) of an individual or an organization to administer and ability (B) a group of individuals to perform a coordinate (C).

(a) CBA
(b) ACB
(c) BAC
(d) BCA
(e) No rearrangement required

Q30. A sentence is given with three words marked as (A), (B), and (C). These words may or may not be placed in their places. Four options with different arrangements of these words are given. Mark the option with the correct arrangement as the answer. If there is no change required, mark 'No rearrangement required' as your answer.

Archaeologists have buried (A) a unique Roman ceremonial carriage from a villa just outside Pompeii, the city unearthed (B) in a volcanic eruption(C) in 79 AD.

(a) ACB

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(b) BCA
(c) BAC
(d) CBA
(e) No rearrangement required

Q31. A sentence is given with three words marked as (A), (B), and (C). These words may or may not be placed in their places. Four options with different arrangements of these words are given. Mark the option with the correct arrangement as the answer. If there is no change required, mark 'No rearrangement required' as your answer.

The pandemic has services (A) the usage (B) of digital payment amplified (C).

(a) CAB
(b) CBA
(c) BAC
(d) BCA
(e) No rearrangement required

Q32. Directions: The question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fit the meaning of the sentence as a whole.

At last, I bought the film _____ of a novel at a _____ cost.

(a) wrongs, rigorous
(b) rights, moderate
(c) left, radical
(d) impair, offensive
(e) spoil, deliberate

Q33. Directions: The question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fit the meaning of the sentence as a whole.

In order to not be _____, the prank caller used technology to _____ his voice.

(a) recognized, distort
(b) complicate, disreputable
(c) interpret, defamed
(d) deface, hail
(e) illuminate, condemn

Q34. Directions: The question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fit the meaning of the sentence as a whole.

The _____ billionaire had plenty of money but still _____ from anyone who could increase his wealth.

(a) crept, content
(b) lurked, sated
(c) greedy, stole
(d) crawled, averse
(e) slid, impassive

Q35. Directions: The question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank that best fit the meaning of the sentence as a whole.

An _____ group of surgeons will _____ the complex surgery on the president.

(a) backfire, coarse
(b) fizzle, gross
(c) influencing, inferior
(d) elite, perform
(e) redound, mediocre

Directions

Directions: Given below is a set of six sentences that, when properly sequenced, form a coherent paragraph. Arrange the sentences in the correct sequence and answer the questions that follow. Sentence C, given in bold, is fixed as the FIRST

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Sentence.

C. The first Test match between England and Australia was played in Melbourne in 1877, but the Ashes legend started after the ninth Test in 1882.

A. Peate was scolded by his captain for not letting Studd, a top batsman, score the runs.

B. In 1882, Australia played one Test match in England at the Oval. It was a low-scoring game on a tough pitch.

D. When the loss sank in, the crowd cheered and carried Boyle and Spofforth to the pavilion.

E. The British press praised the Australians and criticized the English for their lack of spirit.

F. Peate, the last batsman, needed ten runs to win but was bowled out, shocking the Oval crowd.

Q36. Which of the following should be the SIXTH sentence after rearrangement?

(a) F
(b) D
(c) B
(d) A
(e) E

Q37. Which of the following should be the FIFTH sentence after rearrangement?

(a) E
(b) A
(c) D
(d) F
(e) B

Q38. Which of the following should be the FOURTH sentence after rearrangement?

(a) A
(b) F
(c) E
(d) D
(e) B

Q39. Which of the following should be the THIRD sentence after rearrangement?

(a) E
(b) B
(c) A
(d) F
(e) D

Q40. Which of the following should be the SECOND sentence after rearrangement?

(a) E
(b) B
(c) A
(d) D
(e) F

QUANTITATIVE APTITUDE

Directions

The pie chart shows the percentage distribution of total number of students in science and commerce department of college in five year [2013 to 2017]

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The pie charts shows the percentage distribution of total number of students in commerce department of college in five year [2013 to 2017].



- 2013 2014 2015 2016 2017

Note –Number of students in 2016 in commerce department is 70 more than the number of students in 2017 in commerce department. In 2017 number of students in commerce department is 40 more than number of students in science department.

Q41. Ratio of number of male and female students in 2016 science department is 3:2. Number of female students in 2016 science department is 4m. Find the value of m?

(a) 29
(b) 28
(c) 26
(d) 19
(e) 27

Q42. Number of students in arts department in 2014 is 5x + 20. Find the difference between number of student in science and arts department in 2014?

(a) 99
(b) 94
(c) 85

(d) 96
(e) 37

Q43. Ratio of number of students in science and commerce department in 2016 is m:n. Find the value 3m + 4n? [ratio must be lowest integer]
(a) 147
(b) 141
(c) 159
(d) 160
(e) 162

Q44. Find the difference between number of students in science department in 2014 and 2015 together and number of students in commerce department in same year?
(a) 330
(b) 380
(c) 320
(d) 420
(e) 960

Q45. Average number of students in science department in five year is y. Number of students in science department in 2018 is y + 25. Find the number of students in science department in 2018?
(a) 260
(b) 270
(c) 220
(d) 205
(e) 210

Q46. A container contains certain amount mixture of milk and water. 28 liters mixture is taken out and 16 liters milk is added to the mixture. Ratio of total quantity of initial and final mixture is 15 : 11.Final milk in the mixture is 26.2. Find initial water percentage?
(a) 50%
(b) 35%
(c) 45%
(d) 30%
(e) 40%

Q47. Curved surface area of cone is 7% of curved surface area of sphere. Slant height of cone is equal to the radius of sphere. Radius of cone is 14 m. Find the difference between height and radius of cone?
(a) 46
(b) 34
(c) 44
(d) 52
(e) 24

Q48. P, Q and R are three number, such that P < Q < R. Difference between P and R is 4. Product of P and R is 56 more than the square of P. Ratio of P and Sum of Q and R is 2:5. Find the product of P and Q?
(a) 248
(b) 258
(c) 268
(d) 238
(e) 298

Directions

The given table shows the total number of balls [volleyball, football and basketball] in five different shops [A, B, C, D and E], ratio of number of volleyball and football and difference between number of volleyball and football sold.

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Shop	Total number of balls sold	Difference between number of volleyball and football sold	Ratio of number of volleyball and football sold
A	140	40	3:7
B	180	10	6:5
C	150	20	5:3
D	200	80	1:3
E	160	30	4:7

Q49. Only two color [red and white] volleyball sold in shop A and B. 60% volleyball sold in shop A is red color. Total number of red color volleyball sold in shop A and B together is 42. Find number of white color volleyball sold in shop B?

(a) 85
(b) 94
(c) 36
(d) 39
(e) 77

Q50. Difference between number of volleyball and basketball sold in shop E is x. Find the total number of number basketball sold in shop D and E together?

(a) 12x
(b) 9x
(c) 7x
(d) 17x
(e) 19x + 23

Q51. Sum of football sold in shop A and B together is m and sum of volleyball sold in B and C is n. Find the value of m + n?

(a) 210
(b) 260
(c) 290
(d) 230
(e) 310

Q52. Number of balls sold in shop F is 20% more than the sold in shop E. Out of total number of balls sold in shop F, 50% is football then find the total number of volleyball and basketball sold in shop F?

(a) 37
(b) 96
(c) 78
(d) 84
(e) 99

Q53. Ratio of number of bat and football sold in shop D is 3 : 4 and ratio of number of bat and football sold in shop B is 3 : 2. Find the total number of bats sold in shop B and D together?

(a) 165
(b) 174
(c) 185
(d) 258
(e) 267

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Q54. What approximate value should come in place of the question mark (?) in the following question?

79.96% of 200.20 + 50.10 x 3.11 = ? + 25.20% of 60.13

(a) 275
(b) 285
(c) 295
(d) 310
(e) 315

Q55. What approximate value should come in the place of the question mark (?) in the following equation?

38.98 ÷ 12.99 × 16.97 + 43.94 = ? + 99.99 ÷ 4.97 × 6.98

(a) 45
(b) 40
(c) 35
(d) • 40
(e) • 45

Q56. What approximate value should come in the place of the question mark (?) in the following equation?

49.99 + ? ÷ 15.01 + 230.05 + 14.98% of 599.99 = 340.08

(a) • 550
(b) • 440
(c) 445
(d) 450
(e) • 450

Q57. If the ratio between the amount calculated obtained by the person lending Rs. 12000 for 2 years at x % for CI to the amount obtained by lending Rs. 10000 for 3 years for CI at the same rate of interest is 12: 11. Find the amount obtained by lending Rs.8000 for (x + 5)% rate of interest in SI for 3 years.

(a) Rs. 11500
(b) Rs. 11600
(c) Rs. 12400
(d) Rs. 11000
(e) Rs. 11400

Q58. The present ages of A, B and C are in the ratio 4: 5: 3. If' x 'year hence the age of A to B are in the ratio 5: 6. And 'y' years before the ages of B to C were in the ratio 3: 1. If the value of y is 5 more than 'x'. Find the sum of the present ages of three persons A, B and C.

(a) 90
(b) 84
(c) 48
(d) 60
(e) 72

Q59. A Train travel 420 km at p km/hr and remaining 420 km at 140 km/hr. Total time taken by train to cover the whole distance is 6 hour 30 minutes. Find the time taken by train to cover 600 km at p km/hr?

(a) 4.5
(b) 7.5
(c) 5
(d) 6
(e) 5.5

Q60. Discount amount of item is approximately Rs. 1920.25. Profit percentage is approximately 29.85%. Profit amount is approximately 50.01 % more than the discount amount. Find the discount percentage approximately?

(a) 10%
(b) 13%
(c) 14%

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(d) 22%
(e) 29%

Q61. A, B, and C start a business by investing Rs. 2800, Rs. 3600 and Rs. 4000 respectively. After x months C left the business. If at the end of a year total profit share of C is 5/17th of total profit. Find the value of x?

(a) 8
(b) 7
(c) 6
(d) 4
(e) 10

Q62. A and B together complete a work in 12 day. With the help of C, they complete the work in 6 days. Ratio of efficiency of A and B is 3:1. If C complete the work alone in [R + 8] days find in how many days A alone complete the work?

(a) R + 8
(b) R + 16
(c) R + 12
(d) R + 10
(e) R + 14

Directions

Number of female teachers in school A is four more than the number male teacher in school A. Ratio of number of male and female teacher in school B is 10:13. Ratio of number of male teachers in school A and B is 4:5. Number of male teacher in B is two less than the number of female teacher in school C. Number of male teacher in school C is four more than the number of female teacher in school A. Difference between number of male teacher in school A and B is 10.

Q63. Total number of teacher in school A and B together is m + 35. Find the value of m?

(a) 164
(b) 184
(c) 204
(d) 284
(e) 294

Q64. 20% female teacher in school B is married and 25% female teacher in school C married. Find the difference between number female married teacher in school B and C?

(a) 1
(b) 3
(c) 4
(d) 10
(e) 0

Q65. Average number of male teacher in school C and D is 41. Find the sum male teacher in school B and D?

(a) 94
(b) 84
(c) 66
(d) 77
(e) 82

Q66. Number of male sub staff in school B is 12% of number of male teacher in same school. Number of female sub staff in the school is 8 more than the number male sub staff. Find the number of female sub staff in school B?

(a) 14
(b) 16
(c) 27
(d) 26
(e) 22

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Q67. Average age of male teachers of school A is 48 years old and average age of female teachers of school A is 34 years old. Find the average age of all the teacher in school A?

(a) 42.66
(b) 45.33
(c) 40.66
(d) 41.33
(e) 44.78

Q68. Average of certain number group of students is 64. Two students of 50.5 and 54.5 number students left the group and one students of 72.5 number of added to the group. Now average increase by 1.5. Find current number of students in the group?

(a) 21
(b) 29
(c) 27
(d) 19
(e) 37

Q69. Side of square is [a + 10]. Perimeter of square is equal to perimeter of rectangle whose length and breadth is 3a and a respectively. Find the difference between area of square and rectangle?

(a) 90
(b) 100
(c) 50
(d) 10
(e) 180

Q70. Time taken by a boat is two hour less than when the boat cover 72 km downstream than time taken by the boat to cover 72 km upstream. If speed of stream is 3 km/hr. Find the upstream speed?

(a) 21
(b) 9
(c) 15
(d) 12
(e) 18

REASONING ABILITY

Directions

Direction : Read the following information carefully and answer the questions based on given information.

Nine persons A, B, C, D, E, F, G, H, J are sitting in a row and all of them are facing in north direction but not necessarily in the same order. H sits to the left of C. Less than four persons sits to the right of G. B and A are immediate neighbour of J. Number of persons sits to the left of E is one less than right of F. Only two persons sits between B and H, who is an immediate neighbour of G.D sits third from right end and F does not sits at any extreme end.

Q71. As many person sits between E and A as many person between J and _ ?

(a) F
(b) D
(c) G
(d) B
(e) None of these.

Q72. Which of the following statement(s) is / are correct ?

(a) J sits to the right of H.
(b) G and D are immediate next to each other.
(c) Only one person sits between F and C.
(d) More than two persons sits between E and G.

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(e) Both 2 and 4.

Q73. Find odd one out.

(a) EJ
(b) BA
(c) AG
(d) JD
(e) DC

Q74. Who sits at extreme end points ?

(a) DC
(b) FC
(c) GB
(d) EC
(e) FB

Q75. Who sits second to the right of H ?

(a) D
(b) J
(c) G
(d) E
(e) F

Directions

Direction : Read the following information carefully and answer the questions based on given information.

Seven boxes B, G, K, L, O, R, S contains different colours which are White, Purple, Red, Grey, Black, Blue, Orange are arranged in such a way each box placed one above other but not necessarily in same order. Box which contains purple colour placed immediately below box O. Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. Atmost two boxes are placed above O. Box G is placed above box K, which contains Black colour. Box B is immediately below the box which contains Orange colour. The box which contains Purple colour is placed immediately above and below the box which contains Blue and that of Red but not necessarily in the same order. As many boxes above box B as many below box S, which contains Grey colour. As many boxes above box L as many below it. There is three box placed between R and G where R is above G.

Q76. Find the correctly match pair.

(a) R - Blue
(b) G - Grey
(c) L - White
(d) O - Blue
(e) None of these

Q77. Find odd one out.

(a) RO
(b) BL
(c) GK
(d) GO
(e) RG

Q78. Which colour does L contains ?

(a) White
(b) Purple
(c) Red
(d) Orange
(e) Blue

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Q79. How many boxes are below K ?

(a) Three
(b) Four
(c) More than four.
(d) One
(e) None

Q80. Which box contains Red colour?

(a) B
(b) O
(c) L
(d) G
(e) None of these

Q81. If it is possible to make only one meaningful English word with the first, the second, the seventh and the tenth letters of the word RECLAIMING, which of the following will be the second letter of the newly formed word from right end ? If no such word can be made give 'X' as the answer and if more than one such word can be made give 'Y' as the answer.

(a) Y
(b) E
(c) R
(d) M
(e) X

Q82. Directions: In the following question assuming the given statements to be True, find which of the conclusion among given conclusions is/are definitely true and then give your answers accordingly.

Statements: L = M, F ≤ D, K ≥ L, M ≤ F

Conclusions:

I. M ≤ K

II. D ≥ M

(a) None is true
(b) Only I is true
(c) Only II is true
(d) Either I or II is true
(e) Both I and II is true

Q83. Directions: In the following question assuming the given statements to be True, find which of the conclusion among given conclusions is/are definitely true and then give your answers accordingly.

Statements: P ≥ Q, R > S, R ≥ Q, L = P < T

Conclusions:

I. R > P

II. T > Q

(a) None is True
(b) Only I is True
(c) Only II is True
(d) Either I or II is True
(e) Both I and II are True

Q84. Directions: In the following question assuming the given statements to be True, find which of the conclusion among given conclusions is / are definitely true and then give your answers accordingly.

Statements: A ≥ B ≥ C; C < D < E; E ≥ F ≥ G; G < H > I

Conclusions:

I. A > I

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II. D < F

III. F > I

(a) None is true
(b) Both I and II are true
(c) Only III is true
(d) Only II is true
(e) Only I is true

Directions

Directions: Read the following information carefully and answer the questions based on given information.

Six persons namely E, I, M, O, U, Y lives on three story building on two flats P and Q such that bottom most floor is number 1 and top most floor is number 3 and Flat P is to the west of Flat Q but not necessarily in the same order. M lives immediate below floor O but does not live just below. I lives just below E's floor but not in the same flat. U lives on odd number floor but not adjacent to Y. As many person lives below U as many person lives above I. Y lives below U. O does not lives to the west of any person.

Q85. Which of the following statement(s) is / are correct ?

A) O lives above E in Flat Q.

B) Y is in east of I.

C) U lives in Southwest of I.

(a) Only A
(b) Both B and C
(c) Both A and C
(d) Only C
(e) Both A and B

Q86. Which of the following is / are correctly matched ?

(a) U - Flat P.
(b) M - Flat Q.
(c) I - Flat Q
(d) Y - Flat P
(e) None of these.

Q87. Find the odd one out.

(a) U
(b) O
(c) E
(d) I
(e) Y

Q88. Which of the following statement(s) is / are correct ?

(a) U lives below Y.
(b) E lives on floor 3.
(c) M lives to the west of E.
(d) I lives below O.
(e) Both 3 and 4.

Q89. Who lives on floor 2 Flat Q ?

(a) U
(b) M
(c) Y
(d) E
(e) None of these

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Q90. How many such pairs of digits are there in the number '56829371', each of which has as many digits between them in the number (both in the forward and backward directions) as they have between them in the Numeric Series ?

(a) Two
(b) Three
(c) Four
(d) Five
(e) More than Five

Directions

Directions: Read the following information carefully and answer the questions based on given information.

Eight persons Alisha, Arpita, Ankush, Nidhi, Aarav, Kritika, Ram, Aryan born on same date of different years which are 1983,1987,1995,1998,2004,2007,2011 and 2014 but not necessarily in the same order. Their age is calculated taking base year 2025. As many person born between Ram and Ankush as many person between Ankush and Arpita. Nidhi born in a leap year. Atmost two person born before Kritika. Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita. Aarav's age is a prime number. As many person born before Kritika as many after Arpita.

Q91. Which of the following statement is / are correct ?

(a) Only two persons born between Kritika and Aryan.
(b) As many person born before Ankush as many person after Nidhi.
(c) Kritika is younger than Alisha.
(d) Only Arpita is older than Aarav.
(e) None of these

Q92. Find odd one out.

(a) Ram
(b) Aryan
(c) Kritika
(d) Alisha
(e) Nidhi

Q93. Which of the following is / are correctly matched ?

(a) Kritika - 1983
(b) Ankush - 1995
(c) Aarav - 2011
(d) Aryan - 1983
(e) Alisha - 1995

Q94. Who was born in a leap year ?

(a) Arpita
(b) Aarav
(c) Alisha
(d) Nidhi
(e) Ram

Q95. Which of them has age which is a perfect cube ?

(a) Nidhi
(b) Ankush
(c) Aryan
(d) Kritika
(e) Alisha

Directions

Direction : Read the following information carefully and answer the questions based on given information.

There are fourteen persons sitting in two parallel rows such that seven persons sits on each row. In row 1 persons such that B, I,

K, M, O, R, Y sits and faces towards south direction and in row 2 persons such that A, E, F, H, U, X, Z sits and faces towards north direction but not necessarily in same order. E sits second to the right of the person who faces I. As many person sits between R and O as many person between Y and M. Only two person sits between B and I. The person who sits opposite to O is immediate neighbour of both H and A. Z sits at one of the extreme end and faces the person who is immediate neighbour of M. E sits to the left of Z. I sits to the right of B. As many person between X and H as many person sits between H and Z. U doesn't faces O. M is the only neighbour of K, who sits diagonally opposite to X. Y sits to the right of B.

Q96. Who sits diagonally opposite to Z ?

(a) Y
(b) B
(c) R
(d) I
(e) O

Q97. Which of the following statement is / are correct ?

(a) K faces Z.
(b) H is the immediate neighbour of E and F.
(c) R sits second right of B.
(d) U sits immediately right of X.
(e) All of these.

Q98. Find the odd one out.

(a) I
(b) X
(c) K
(d) Z
(e) F

Q99. Who sits second to left of the person who faces E ?

(a) I
(b) O
(c) R
(d) M
(e) None of these

Q100. Who among them faces B ?

(a) U
(b) E
(c) H
(d) F
(e) A

ANSWER KEY

1	a	2	a	3	b	4	b	5	e	6	b	7	c	8	d	9	a	10	b
11	a	12	b	13	c	14	d	15	c	16	b	17	b	18	c	19	c	20	d
21	b	22	e	23	b	24	b	25	c	26	b	27	b	28	b	29	d	30	c
31	b	32	b	33	a	34	c	35	d	36	d	37	a	38	d	39	d	40	b
41	d	42	b	43	b	44	c	45	d	46	e	47	b	48	d	49	c	50	b
51	d	52	b	53	a	54	c	55	e	56	e	57	b	58	d	59	c	60	b
61	a	62	c	63	a	64	e	65	b	66	a	67	c	68	a	69	b	70	d
71	c	72	e	73	d	74	d	75	a	76	d	77	e	78	b	79	e	80	d
81	c	82	e	83	c	84	a	85	e	86	a	87	c	88	e	89	d	90	e

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91 b	92 e	93 e	94 d	95 b	96 d	97 e	98 e	99 b	100 c

SOLUTIONS

Q1. Answer: (a) So did her husband

The correct answer is 'So did her husband'

Key Points

The given phrase is to be replaced with 'So did her husband'

• According to the rule of grammar, With coordinate clauses where the action is the same in both, given in the sentence, we can also use the inverted pattern i.e. 'So/Neither + do/does/did + Subject'

• Let's see an example-

• Dad never learned to speak any other languages, and neither did Mum.

So the correct sentence is- She really enjoyed the thrill of the open road, and so did her husband.

Q2. Answer: (a) Fewer people attend church

The correct answer is 'Fewer people attend church'

Key Points

The given phrase is to be replaced with 'Fewer people attend church'

• According to grammar, Nouns such as 'Church, hospital, School' do not take an article if we think of their purpose i.e church as a place of worship, or school as a place of learning.

• Let's see an example-

• Can children leave school at fourteen in your country?

So the correct sentence is→ Fewer people attend church regularly now than twenty years ago.

Additional Information

• 'Few' is a determiner which is used with the countable nouns and 'less' is a determiner which is used with the uncountable nouns.

Q3. Answer: (b) Turn down

The correct answer is 'turn down'.

Key Points

• The phrase "turn down" acts as a noun phrase in this context, meaning a rejection, refusal, or a dismissive response.

• The sentence describes his body language, implying his gestures were more rejecting or unwelcoming than the speaker anticipated.

• The original phrase "turn up" typically refers to a surprise or unexpected event, which does not logically pair with describing someone's specific "gestures."

Therefore, the correct answer is Option 2.

Complete Sentence: "His gestures were more of a turn down than I expected."

Additional Information

• Option 1: "Turn on" is incorrect because while it can mean something that causes excitement, it does not fit the intended formal context of this sentence.

• Option 3: "Turn in" is incorrect; as a phrasal verb, it means to submit an assignment or to go to sleep.

• Option 4: "Turn back" is incorrect because it refers to a reversal or returning the way you came, which does not describe physical gestures.

Q4. Answer: (b) A-F

The correct answer is option 2), i.e. A-F.

Key Points

The correct sequences are:

• A. mentions about the action of the reduction of greenhouse and F. says why is the action helpful. So, A-F.

• B. says something about Amazon basin and D. informs about the inhabitants who used to live there. So, B-D.

• C. mentions about Phytoliths and E. mentions the usage of it. So, C-E.

Hence, Option 2) is the answer.

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Q5. Answer: (e) None of these

The correct answer is option 5), i.e. None of these

Key Points

The correct sequences are:

• A. talks about the relaxation of immigration and E. mentions the names of the places where it is welcomed. So, A-E.

• B. mentions the doctors and nurses of Germany who don't have licenses and D. says what happened to them. So, B-D.

• C. talks about the refugees and other migrants and F. informs what they are exposed to. So, C-F.

Hence, Option 5) is the answer.

Q6. Answer: (b) health

The solution is in Hindi. Read it online.

Q7. Answer: (c) proteins

The solution is in Hindi. Read it online.

Q8. Answer: (d) health

The solution is in Hindi. Read it online.

Q9. Answer: (a) immunity

The solution is in Hindi. Read it online.

Q10. Answer: (b) boosting

The solution is in Hindi. Read it online.

Q11. Answer: (a) nutrients

The solution is in Hindi. Read it online.

Q12. Answer: (b) Kamya thinks she is more powerful than Kashish.

The correct answer is- 'Kamya thinks she is more powerful than Kashish.'

Key Points

• Option 1 is incorrect.

• We use "every + singular noun" to refer individually to all the members of a complete group of something.

• Example: There's a photograph on the wall of every child in the school.

• **We use "plenty of" as a quantifier before both countable and uncountable nouns to mean 'a lot', 'a large quantity'.

• Example: Don't worry there are plenty of options.

• So, we have to replace "every" with "plenty" to make it grammatically correct.

• Option 2 is correct.

• When two items/people/situations are compared, a comparative degree is used by putting ‘er’ to the adjective word or "more" with the adjective in association with the word ‘than’.

• Example:

• She is more cheerful than her sister.

• She is smarter than her sister.

• The presence of the word 'than' after the blank shows that there must be a comparative degree of the word 'powerful.'

• The comparative degree of 'powerful' is formed by adding "more" after the positive degree of the adjective "powerful."

• Option 3 is incorrect.

• We can see the second part of the sentence is in the Past Tense.

• It denotes that when the traffic cops attempted to pull Riya over, she was moving quite quickly.

• So, we need to write this sentence in the Past Tense.

• **So, we have to replace "is" with "was" to make it grammatically correct.

• Option 4 is incorrect.

• The word "honour" is typically pronounced with a silent 'h', therefore producing a vowel sound.

• **So, we have to replace "a" with "an" to make it grammatically correct.

• So, the correct answer is Option 2.

Correct sentence: Kamya thinks she is more powerful than Kashish.

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Q13. Answer: (c) Neither the rain nor the wind were enough to cancel the event.

The correct answer is- 'Neither the rain nor the wind were enough to cancel the event.'

Key Points

• Option 1 is correct.

• The subject "The team, along with the coach" is singular. Therefore, the verb "was" correctly agrees with the singular subject.

• Example: The manager, along with his team, was present at the meeting.

• Option 2 is correct.

• The phrase "Each of the boys" is considered singular and requires a singular verb, "has." The use of "his" is also correct.

• Example: Each of the students has completed his or her assignment.

• Option 3 is incorrect.

• The subject closer to the verb governs the number of the verb. Here, "wind" is singular, so the verb should be "was."

• Correct sentence: Neither the rain nor the wind was enough to cancel the event.

• Option 4 is correct..

• The expression "Many a person" is a formal way of saying "many people" and is grammatically correct with the singular verb "believes."

• Example: Many a student believes that hard work leads to success.

• So, the correct answer is Option 3.

Q14. Answer: (d) Knowledge of at least four languages is required to pass the examination.

The solution is in Hindi. Read it online.

Q15. Answer: (c) There is less people attending the lecture than expected.

The correct answer is- 'There is less people attending the lecture than expected.'

Key Points

• Option 1 is correct.

• "The data" is treated as a singular entity, hence "shows" is correctly used as the verb.

• Example: The data provides valuable insights.

• Option 2 is correct.

• "The company's new policy" is correctly referred to affect all employees immediately.

• Example: The new rule affects all members from today.

• Option 3 is incorrect.

• "Less" should be replaced with "fewer" when referring to countable nouns like "people."

• Correct sentence: There are fewer people attending the lecture than expected.

• Option 4 is correct..

• The use of "more quickly" accurately forms the comparative degree for the adverb, making the sentence correct.

• Example: He finishes the task more quickly than his peers.

• So, the correct answer is Option 3.

Q16. Answer: (b) Locally produced valuables have the advantage of shorter supply chains.

The solution is in Hindi. Read it online.

Q17. Answer: (b) Extreme weather conditions

The correct answer is Option 2.

Key Points

• The passage specifically mentions "extreme weather conditions" as one of the primary causes of food supply disturbances.

• Climate change has led to unpredictable and severe weather patterns, resulting in poor crop yields.

• Droughts, floods, and other natural disasters have significantly impacted agricultural productivity, reducing the supply of key staples such as wheat, rice, and maize.

Therefore, the correct answer is Option 2.

Correct Information: The passage highlights extreme weather conditions, driven by climate change, as a primary cause of global food supply disturbances.

Additional Information

• Option 1: "Political instability" is incorrect as the passage does not mention political instability as a primary cause.

• Option 3: "Technological failures" is incorrect as the passage does not discuss technological failures as a primary cause.

• Option 4: "Urbanization" is incorrect as the passage does not address urbanization as a primary cause.

• Option 5: "Economic recession" is incorrect as the passage does not mention economic recession as a primary cause.

Q18. Answer: (c) Labour shortages and transport restrictions

The correct answer is Option 3.

Key Points

• The passage specifically mentions that the ongoing COVID-19 pandemic has created logistical challenges such as "labour shortages and transport restrictions."

• These challenges have disrupted food distribution networks and led to delays and higher transportation costs.

• The pandemic has also caused border closures and trade restrictions, further complicating the flow of goods.

Therefore, the correct answer is Option 3.

Correct Information: The passage highlights the logistical challenges created by the COVID-19 pandemic, including labour shortages and transport restrictions, which have affected the food supply chain.

Additional Information

• Option 1: "Overproduction of food" is incorrect as the passage discusses disruptions in the food supply chain, not overproduction.

• Option 2: "Decrease in consumer demand" is incorrect as this challenge is not mentioned in the passage.

• Option 4: "Increase in agricultural productivity" is incorrect as the passage mentions poor crop yields, not an increase in productivity.

• Option 5: "Improvement in fuel efficiency" is incorrect as the passage discusses rising energy costs, not improvements in fuel efficiency.

Q19. Answer: (c) Wheat, rice, and maize

The correct answer is Option 3.

Key Points

• The passage specifically mentions "Wheat, rice, and maize" as the crops affected by extreme weather conditions.

• These crops have experienced poor yields due to climate change-induced droughts, floods, and other natural disasters.

• The reduction in supply of these staples has contributed to rising food prices and inflation.

Therefore, the correct answer is Option 3.

Correct Information: The passage highlights the impact of extreme weather conditions on specific crops, namely "wheat, rice, and maize," and explains how this affects the global food supply.

Additional Information

• Option 1: "Barley, soybeans, and potatoes" is incorrect as these specific crops were not mentioned in the passage.

• Option 2: "Corn, oats, and rye" is incorrect as these specific crops were not mentioned in the passage.

• Option 4: "Sugarcane, citrus fruits, and vegetables" is incorrect as these specific crops were not mentioned in the passage.

• Option 5: "Beans, lentils, and nuts" is incorrect as these specific crops were not mentioned in the passage.

Q20. Answer: (d) A and C

The correct answer is Option 4.

Key Points

• Statement A: Climate change has led to unpredictable and severe weather patterns.

• This statement is correct as it accurately reflects the context provided in the passage.

• Statement B: Rising healthcare costs have significantly contributed to food inflation.

• The passage does not mention rising healthcare costs as a contributing factor to food inflation.

• Statement C: Fuel prices directly impact the costs of agricultural production and transportation.

• This statement is correct as it aligns with the information provided in the passage about the impact of fuel prices on agricultural production and transportation costs.

• Hence, the statements A and C are identified as correct in the context of the passage.

Therefore, the correct answer is: ‘A and C’.

Q21. Answer: (b) Stabilizing food prices requires both immediate and long-term strategies.

The correct answer is 'Option 2'.

Key Points

• A) Governments are indifferent to the challenges in the global food supply chain.

• This cannot be inferred from the passage. The passage mentions that governments and international bodies are working tirelessly to address the issues in the global food supply chain.

• B) Stabilizing food prices requires both immediate and long-term strategies.

• This can be inferred from the passage. Various strategies and efforts by governments and international bodies to handle the situation are mentioned, highlighting the need for both immediate and long-term actions.

• C) The steps taken so far have completely solved the food supply chain disruptions.

• This cannot be inferred from the passage. The passage states that the road ahead remains challenging, and comprehensive and coordinated actions are required globally.

• D) Climate change has no significant effect on food production.

• This cannot be inferred from the passage. The passage clearly describes how climate change has led to extreme weather conditions and poor crop yields, impacting food production significantly.

• E) Rising energy prices are unrelated to food inflation.

• This cannot be inferred from the passage. The passage explains that rising energy prices contribute to higher food production and transportation costs, leading to food inflation.

Therefore, the correct answer is Option 2.

Additional Information

• Only A: Incorrect because the passage indicates that governments are actively working on solving the issues, so A cannot be inferred.

• Only B: Correct because the passage supports the inference that both immediate and long-term strategies are needed.

• All A, B, and C: Incorrect because A and C cannot be inferred from the passage.

• Only C: Incorrect because the passage implies that the disruptions are still ongoing, so C cannot be inferred.

Q22. Answer: (e) Producing and delivering

The correct answer is 'producing and delivering'.

Key Points

• The expression "producing and delivering" accurately describes the activities impacted by rising fuel prices mentioned in the text.

• Rising fuel prices primarily affect costs associated with the production and transportation of food products.

• Other options like "quality controlling," "improving and marketing," "harvesting and processing," and "growing and storing," do not fit the context as precisely.

Therefore, the correct answer is 'Option 5'.

Complete Sentence: As fuel prices continue to climb, so do the costs of producing and delivering food products.

Additional Information

• Quality controlling: involves ensuring that products meet certain standards.

• Improving and marketing: refers to enhancing product features and promoting them.

• Harvesting and processing: describes the activities of gathering crops and converting them into final products.

• Growing and storing: pertains to the cultivation and storage of agricultural products.

Q23. Answer: (b) Bleak

The solution is in Hindi. Read it online.

Q24. Answer: (b) Persist

The solution is in Hindi. Read it online.

Q25. Answer: (c) Addressed

The solution is in Hindi. Read it online.

Q26. Answer: (b) Both A & C

The solution is in Hindi. Read it online.

Q27. Answer: (b) Both A & C

The solution is in Hindi. Read it online.

Q28. Answer: (b) Both A & C

The solution is in Hindi. Read it online.

Q29. Answer: (d) BCA

The correct answer is BCA.

Key Points

• Task: job or duty

• Ability: capacity

• Coordinate: to harmonize or work together

Important Points

We may consider A, B, and C to be three blanks. A is the first blank, B is the second, and C is the third.

• Team management is a skill. Therefore, the word 'ability' is appropriate for the first blank.

• A verb is required for the second blank. The word 'coordinate' is appropriate for the first blank because coordination is important in order to manage a team.

• The word 'task' is appropriate for the last blank because a task can be performed.

The correct sentence will be: Team management is the ability of an individual or an organization to administer and coordinate a group of individuals to perform a task.

Q30. Answer: (c) BAC

The correct answer is BAC.

Key Points

• Buried: hidden underground

• Unearthed: bring to the surface

• Eruption: a sudden outbreak of something

Important Points

We may consider A, B, and C to be three blanks. A is the first blank, B is the second, and C is the third.

• The word 'unearthed' is appropriate for the first blank because the archaeologists have found something. Thus the word 'unearthed' is appropriate for the first blank.

• The word 'buried' is appropriate for the second blank because the archaeologists have discovered something which was hidden. Thus the word 'buried' is appropriate for the second blank.

• The word 'eruption' is appropriate for the last blank because the phrase 'volcanic eruption' is grammatically and contextually meaningful. Thus, the correct choice is 'eruption.

The correct sentence will be: Archaeologists have unearthed a unique Roman ceremonial carriage from a villa just outside Pompeii, the city buried in a volcanic eruption in 79 AD.

Q31. Answer: (b) CBA

The correct answer is CBA.

Key Points

• Services: act of assistance

• Usage: the act of using something

• Amplified: expanded or developed

Important Points

We may consider A, B, and C to be three blanks. A is the first blank, B is the second, and C is the third.

• The past participle form of the verb(Verb^3) is required for the first blank because 'has' is used before it. Thus, the correct choice is 'amplified' which is the 'verb^3' form.

• The definite article 'the' suggests that a noun is required for the second blank. Hence, the word 'usage' which is a noun is appropriate for the second blank.

• The word 'services' is appropriate for the third blank because the phrase 'digital payments services' is contextually meaningful. Thus the correct choice is 'services'.

The correct sentence will be: The pandemic has amplified the usage of digital payment services.

Q32. Answer: (b) rights, moderate

The correct answer is 'rights, moderate.'

Key Points

• The given sentence is talking about buying something related to the film of a novel at some cost.

• Let us explore the words in the given options:

• 'Rights' means moral or legal entitlements to have or do something.

• 'Moderate' means average in amount.

Conclusion: To buy the legal entitlements of a novel to convert it into a film at an average rate or cost.

Hence, the correct answer is option 2.

Complete Sentence: At last, I bought the film rights of a novel at a moderate cost.

Additional Information

• The meaning of other options:

• 'Wrongs' means unjust, dishonest, or immoral acts.

• 'Rigorous' means harsh and demanding.

• 'Left' means on, towards, or relating to the side of a human body or of a thing that is to the west when the person or thing is facing north.

• 'Radical' means very great; complete.

• 'Impair' means to damage something or make it weaker.

• 'Offensive' means unpleasant; insulting.

• 'Spoil' means to change something good into something bad, unpleasant, useless, etc.

• 'Deliberate' means done on purpose; planned.

Q33. Answer: (a) recognized, distort

The solution is in Hindi. Read it online.

Q34. Answer: (c) greedy, stole

The correct answer is 'greedy, stole.'

Key Points

• The given sentence is talking about a billionaire who always looks for increasing his money.

• Let us explore the words in the given options:

• 'Greedy' means having or showing an intense and selfish desire for wealth or power.

• 'Stole' means to take something from a person, shop, etc. without permission and without intending to return it or pay for it.

Conclusion: Even though the billionaire had lots of money he still always showed an intense and selfish desire for wealth.

Hence, the correct answer is option 3.

Complete Sentence: The greedy billionaire had plenty of money but still stole from anyone who could increase his wealth.

Additional Information

• The meaning of other options:

• 'Crept' means to move very quietly and carefully so that nobody will notice you.

• 'Content' means to accept something even though it was not exactly what you wanted.

• 'Lurked' means to wait somewhere secretly especially in order to do something bad or illegal.

• 'Sated' means supplying someone with as much as or more of something that is desired or can be managed.

• 'Crawled' means to be very polite or pleasant to somebody in order to be liked or to gain something.

• 'Averse' means against or not in favor of something.

• 'Slid' means to move or proceed smoothly and readily.

• 'Impassive' means showing no emotion or reaction.

Q35. Answer: (d) elite, perform

The correct answer is 'elite, perform.'

Key Points

• The given sentence is talking about the complex surgery on the president by some group of surgeons.

• Let us explore the words in the given options:

• 'Elite' means a social group that is thought to be the best or most important because of its power, money, intelligence, etc.

• 'Perform' means to do a piece of work or something that you have been ordered to do.

Conclusion: The best group of surgeons to do the complex surgery on the president.

Hence, the correct answer is option 4.

Complete Sentence: An elite group of surgeons will perform the complex surgery on the president.

Additional Information

• The meaning of other options:

• 'Backfire' means to have an unexpected and unpleasant result, often the opposite of what was intended.

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• 'Coarse' means (used about a person or his/her behavior) rude, likely to offend people; having bad manners.
• 'Fizzle' means end or fail in a weak or disappointing way.
• 'Gross' means very rude and unpleasant.
• 'Influencing' means to have an effect on or power over somebody/something so that he/she/it changes.
• 'Inferior' means low or lower in social position, importance, quality, etc.
• 'Redound' means to contribute greatly to a person's credit or honor.
• 'Mediocre' means of only average quality; not very good.

Q36. Answer: (d) A

The correct answer is 'Sentence A'.

Key Points

• Sentence C introduces the origin of the Ashes legend by referring to the historic 1882 Test.
• Sentence B follows by introducing the 1882 Test match played at the Oval.
• Sentence F narrates the decisive moment of the match when Peate, the last batsman, was bowled out, resulting in England's defeat.
• Sentence D naturally follows because it describes the immediate reaction of the crowd after England's loss.
• Sentence E then presents the reaction of the British press.
• Sentence A concludes the paragraph by mentioning that Peate was scolded by his captain after the match.

The correct sequence is: C → B → F → D → E → A.

Therefore, the SIXTH sentence after rearrangement is Sentence A.

Additional Information

• When arranging a paragraph:
• Begin with the introductory statement.
• Follow the chronological sequence of events.
• Place immediate reactions after the main event.
• End with later reactions or concluding remarks.

Q37. Answer: (a) E

The correct answer is 'Sentence E'.

Key Points

• Sentence C introduces the topic by mentioning the origin of the Ashes legend.
• Sentence B follows by introducing the 1882 Test match at the Oval.
• Sentence F describes the decisive moment when Peate was bowled out, resulting in England's defeat.
• Sentence D naturally follows, describing the crowd's reaction after Australia's victory.
• Sentence E comes next, explaining the reaction of the British press, which praised Australia and criticized England.
• Finally, Sentence A concludes the passage by mentioning that Peate was scolded by his captain for not allowing Studd to face the bowling.

The correct sequence is: C → B → F → D → E → A.

Therefore, the FIFTH sentence is Sentence E.

Additional Information

• When solving sentence rearrangement questions:
• Identify the introductory sentence.
• Arrange the events in chronological order.
• Place reactions and consequences after the main incident.
• End with concluding remarks or specific outcomes.

Q38. Answer: (d) D

The correct answer is 'Sentence D'.

Key Points

• Sentence C introduces the origin of the Ashes legend by referring to the historic 1882 Test.
• Sentence B follows by introducing the 1882 Test match played at the Oval.
• Sentence F narrates the decisive moment of the match when Peate, the last batsman, was bowled out, resulting in England's defeat.

• Sentence D naturally follows because it describes the immediate reaction of the crowd after England's loss.
• Sentence E then presents the reaction of the British press.
• Sentence A concludes the paragraph by mentioning that Peate was scolded by his captain after the match.
The correct sequence is: C → B → F → D → E → A.
Therefore, the FOURTH sentence after rearrangement is Sentence D.
Additional Information
• When arranging a paragraph:
• Begin with the introductory statement.
• Follow the chronological sequence of events.
• Place immediate reactions after the main event.
• End with later reactions or concluding remarks.

Q39. Answer: (d) F

The correct answer is 'Sentence F'.
Key Points
• Sentence C introduces the origin of the Ashes legend by referring to the historic 1882 Test.
• Sentence B follows by introducing the 1882 Test match played at the Oval.
• Sentence F narrates the decisive moment of the match when Peate, the last batsman, was bowled out, resulting in England's defeat.
• Sentence D naturally follows because it describes the immediate reaction of the crowd after England's loss.
• Sentence E then presents the reaction of the British press.
• Sentence A concludes the paragraph by mentioning that Peate was scolded by his captain after the match.
The correct sequence is: C → B → F → D → E → A.
Therefore, the THIRD sentence after rearrangement is Sentence F.
Additional Information
• When arranging a paragraph:
• Begin with the introductory statement.
• Follow the chronological sequence of events.
• Place immediate reactions after the main event.
• End with later reactions or concluding remarks.

Q40. Answer: (b) B

The correct answer is 'Sentence B'.
Key Points
• Sentence C introduces the topic by explaining when the first Test match was played and how the Ashes legend began after the 1882 Test.
• Sentence B naturally follows because it introduces the specific 1882 Test match at the Oval, which is mentioned in Sentence C.
• Sentence F then describes the climax of the match, where Peate was bowled out, leading to England's defeat.
• Sentence D follows by describing the crowd's reaction after Australia's victory.
• Sentence E explains the reaction of the British press to England's defeat.
• Sentence A concludes the passage by mentioning the criticism of Peate by his captain after the match.
The correct sequence is: C → B → F → D → E → A.
Therefore, the SECOND sentence is Sentence B.
Additional Information
• In sentence rearrangement:
• Start with the introductory sentence.
• Follow the chronological order of events.
• Place reactions and consequences after the main event.
• Look for logical links through time expressions and pronoun references.

Q41. Answer: (d) 19

Number of students in commerce department is 70 more than the number of students in 2017.
So, 30% - 20% = 70

Or, 10% = 70

Or, 100% = 700

So, total number of students in commerce department is 700.

Number of students in commerce department in 2017 is 700 × 20/100 = 140

Number of students in science department in 2017 is 140 – 40 = 100

So, number of student in 2017 in two department together is 140 + 100 = 240.

Total value of pie chart is 100%

So, 12% + x% + 30% + 25% + [x-3]% = 100

Or, 2x = 100 – 12 – 30 -25 +3 = 36

Or, x = 36 /2 = 18

So, Percentage of students in science and commerce department together in 2017 is 18 – 3 = 15%

So, 15% = 240

Or, 100% = [240/15] ×100 =1600

Year	Number of students in science and commerce department	Number of students in commerce department	Number of students in science department
2013	1600 × 12/100 = 192	700 ×18/100 = 126	192 – 126 = 66
2014	288	84	204
2015	480	140	340
2016	400	210	190
2017	240	140	100

Calculation

Number of female students in 2016 science department is 190 × 2/5 = 76

So, 4m = 76, m = 76 / 4 = 19

Q42. Answer: (b) 94

Number of students in commerce department is 70 more than the number of students in 2017.

So, 30% - 20% = 70

Or, 10% = 70

Or, 100% = 700

So, total number of students in commerce department is 700.

Number of students in commerce department in 2017 is 700 × 20/100 = 140

Number of students in science department in 2017 is 140 – 40 = 100

So, number of student in 2017 in two department together is 140 + 100 = 240.

Total value of pie chart is 100%

So, 12% + x% + 30% + 25% + [x-3]% = 100

Or, 2x = 100 – 12 – 30 -25 +3 = 36

Or, x = 36 /2 = 18

So, Percentage of students in science and commerce department together in 2017 is 18 – 3 = 15%

So, 15% = 240

Or, 100% = [240/15] ×100 =1600

Year	Number of students in science and commerce department	Number of students in commerce department	Number of students in science department
2013	1600 × 12/100 = 192	700 ×18/100 = 126	192 – 126 = 66
2014	288	84	204
2015	480	140	340
2016	400	210	190

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2017	240	140	100

Calculation

Number of students in arts department in 2014 is 5x + 20 = 5 ×18 + 20 = 110

So, required difference is 204 – 110 = 94

Q43. Answer: (b) 141

Number of students in commerce department is 70 more than the number of students in 2017.

So, 30% - 20% = 70

Or, 10% = 70

Or, 100% = 700

So, total number of students in commerce department is 700.

Number of students in commerce department in 2017 is 700 × 20/100 = 140

Number of students in science department in 2017 is 140 – 40 = 100

So, number of student in 2017 in two department together is 140 + 100 = 240.

Total value of pie chart is 100%

So, 12% + x% + 30% + 25% + [x-3]% = 100

Or, 2x = 100 – 12 – 30 -25 +3 = 36

Or, x = 36 /2 = 18

So, Percentage of students in science and commerce department together in 2017 is 18 – 3 = 15%

So, 15% = 240

Or, 100% = [240/15] ×100 =1600

Year	Number of students in science and commerce department	Number of students in commerce department	Number of students in science department
2013	1600 × 12/100 = 192	700 ×18/100 = 126	192 – 126 = 66
2014	288	84	204
2015	480	140	340
2016	400	210	190
2017	240	140	100

Calculation

Number of students in science department is 190

Number of students in commerce department is 210.

So, required ratio = 190 : 210 = 19:21 = m : n

So, m = 19, n = 21

So, 3m + 4n =3×19 + 4 ×21 = 141

Q44. Answer: (c) 320

Number of students in commerce department is 70 more than the number of students in 2017.

So, 30% - 20% = 70

Or, 10% = 70

Or, 100% = 700

So, total number of students in commerce department is 700.

Number of students in commerce department in 2017 is 700 × 20/100 = 140

Number of students in science department in 2017 is 140 – 40 = 100

So, number of student in 2017 in two department together is 140 + 100 = 240.

Total value of pie chart is 100%

So, 12% + x% + 30% + 25% + [x-3]% = 100

Or, 2x = 100 – 12 – 30 -25 +3 = 36

Or, x = 36 /2 = 18

So, Percentage of students in science and commerce department together in 2017 is 18 – 3 = 15%

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So, 15% = 240

Or, 100% = [240/15] ×100 =1600

Year	Number of students in science and commerce department	Number of students in commerce department	Number of students in science department
2013	1600 × 12/100 = 192	700 ×18/100 = 126	192 – 126 = 66
2014	288	84	204
2015	480	140	340
2016	400	210	190
2017	240	140	100

Calculation

Total number of students in science department in 2014 and 2015 is 204 + 340 = 544

Total number of students in commerce department in 2014 and 2015 is

84 + 140 = 224

So, required difference 544 – 224 = 320

Q45. Answer: (d) 205

Number of students in commerce department is 70 more than the number of students in 2017.

So, 30% - 20% = 70

Or, 10% = 70

Or, 100% = 700

So, total number of students in commerce department is 700.

Number of students in commerce department in 2017 is 700 × 20/100 = 140

Number of students in science department in 2017 is 140 – 40 = 100

So, number of student in 2017 in two department together is 140 + 100 = 240.

Total value of pie chart is 100%

So, 12% + x% + 30% + 25% + [x-3]% = 100

Or, 2x = 100 – 12 – 30 -25 +3 = 36

Or, x = 36 /2 = 18

So, Percentage of students in science and commerce department together in 2017 is 18 – 3 = 15%

So, 15% = 240

Or, 100% = [240/15] ×100 =1600

Year	Number of students in science and commerce department	Number of students in commerce department	Number of students in science department
2013	1600 × 12/100 = 192	700 ×18/100 = 126	192 – 126 = 66
2014	288	84	204
2015	480	140	340
2016	400	210	190
2017	240	140	100

Calculation

Total number of students in science department in five year is 1600 – 700 = 900

So, average is 900 / 5 = 180

So, Number of students in science department in 2018 is 180 + 25 = 205

Q46. Answer: (e) 40%

Shortcut Trick

Let initial quantity be 15x and final be 11x.

Change in quantity: 15x − 28 + 16 = 11x => 4x = 12 => x = 3.

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Initial mixture = 15 × 3 = 45 liters. Final mixture = 11 × 3 = 33 liters.

Final Water = Final Mixture − Final Milk = 33 − 26.2 = 6.8 liters.

Since 16L milk was added, water quantity remains same after taking out 28L: Water in (45−28)L = 6.8L.

Initial water % = (6.8 / 17) × 100 = 40%.

Therefore The correct answer is 40%.

Alternate Method

Given: Initial/Final ratio = 15:11, Removal = 28L, Addition (Milk) = 16L, Final Milk = 26.2L.

=> Let initial quantity = 15x and final quantity = 11x.

=> 15x − 28 + 16 = 11x

=> 4x = 12 => x = 3

=> Total initial quantity = 45 liters; Total final quantity = 33 liters.

=> Water in final mixture = 33 − 26.2 = 6.8 liters.

=> Since only milk was added, water in (45 − 28) = 17 liters of mixture is 6.8 liters.

=> Initial water ratio = 6.8 / 17 = 0.4

=> Initial water percentage = 0.4 × 100 = 40%

Therefore The correct answer is 40%.

Additional Information

Mixture Removal Property

When a part of a mixture is removed, the ratio of ingredients in the remaining mixture and the removed portion remains the same as the initial ratio.

Replacement with Single Liquid

If only one component (e.g., milk) is added back, the quantity of the other component (water) in the mixture remains constant between the removal step and the final step.

Percentage Composition

Percentage of a component = (Quantity of component ÷ Total quantity of mixture) × 100.

Q47. Answer: (b) 34

Shortcut Trick

Ratio of CSA: $\pi rl / 4\pi R^2 = 7 / 100$

Given Slant height (l) = Radius of sphere (R) and r = 14 m.

Substituting: $14 \times R / (4 \times R^2) = 7 / 100 \Rightarrow 14 / (4R) = 7 / 100 \Rightarrow 1 / (2R) = 1 / 100 \Rightarrow R = 50$ m.

So, l = 50 m. Since r = 14 m, height (h) = $\sqrt{(50^2 - 14^2)} = 48$ m.

Difference = 48 − 14 = 34 m.

Therefore The correct answer is 34 m.

Alternate Method

Given: Radius of cone (r) = 14 m, Slant height (l) = Radius of sphere (R).

Formula Used: CSA of cone = πrl; CSA of sphere = $4\pi R^2$; $l^2 = h^2 + r^2$

=> $\pi \times 14 \times l = (7 / 100) \times 4 \times \pi \times R^2$

=> $14 \times l = (7 / 100) \times 4 \times l^2$ (Since l = R)

=> $14 = (28 / 100) \times l$

=> $l = (14 \times 100) \div 28$

=> l = 50 m

=> $h^2 = l^2 - r^2 = 50^2 - 14^2$

=> $h^2 = 2500 - 196 = 2304$

=> $h = \sqrt{2304} = 48$ m

=> Difference = h − r = 48 − 14 = 34 m

Therefore The correct answer is 34 m.

Additional Information

Volume of Cone and Sphere

Volume of cone = $(1/3)\pi r^2 h$ and Volume of sphere = $(4/3)\pi R^3$.

Pythagorean Triplets

Common triplets like (7, 24, 25) can be scaled by 2 to get (14, 48, 50) for quick cone calculations.

Total Surface Area (TSA)

TSA of Cone = $\pi r(l + r)$. Sphere TSA is same as its CSA = $4\pi R^2$.

Q48. Answer: (d) 238

Shortcut Trick

Given Difference R − P = 4 and Product P × R = P2 + 56.

Substitute R = P + 4 => P(P + 4) = P2 + 56 => 4P = 56 => P = 14.

Then R = 18. Ratio P : (Q + R) = 2 : 5 => 14 : (Q + 18) = 2 : 5.

7 × 5 = Q + 18 => 35 = Q + 18 => Q = 17. Product P × Q = 14 × 17 = 238.

Therefore The correct answer is 238.

Alternate Method

Given: P < Q < R, R − P = 4, PR = P2 + 56, P : (Q + R) = 2 : 5

=> PR − P2 = 56

=> P(R − P) = 56

=> P × 4 = 56

=> P = 14

=> R = 14 + 4 = 18

=> P / (Q + R) = 2 / 5

=> 14 / (Q + 18) = 2 / 5

=> 7 / (Q + 18) = 1 / 5

=> Q + 18 = 35

=> Q = 17

=> Product P × Q = 14 × 17 = 238

Therefore The correct answer is 238.

Additional Information

Ratio and Proportion Properties

If a : b = c : d, then product of extremes equals product of means (a × d = b × c).

Algebraic Identities

Difference of squares: a2 − b2 = (a − b)(a + b). Factoring common terms often simplifies product equations.

Linear Equations

System of equations with 3 variables requires 3 independent conditions for a unique solution.

Q49. Answer: (c) 36

For shop A,

Let number of volleyball and football sold in shop A is 3x and 7x respectively.

So, difference between number of volleyball and football sold is 40

So, 7x – 3x = 40

Or, 4x = 40

Or, x = 40 / 4 = 10

So, Number of volleyballs sold in shop A is 3 × 10 = 30

Number of footballs sold in shop A is 7 × 10 = 70

Number of basketballs sold in shop A is 140 – 70 – 30 = 40

Shop	Number of volleyballs sold	Number of footballs sold	Number of basketballs sold
A	30	70	40
B	60	50	70
C	50	30	70
D	40	120	40
E	40	70	50

Calculation

Number of red color volleyball sold in shop A is 30 × 60 /100 = 18

Number of red color volleyball sold in shop B is 42 -18 = 24

Number of white color volleyball sold in shop B is 60 – 24 = 36

Q50. Answer: (b) 9x

For shop A,

Let number of volleyball and football sold in shop A is 3x and 7x respectively.

So, difference between number of volleyball and football sold is 40

So, 7x – 3x = 40

Or, 4x = 40

Or, x = 40 / 4 = 10

So, Number of volleyballs sold in shop A is 3 × 10 = 30

Number of footballs sold in shop A is 7 × 10 = 70

Number of basketballs sold in shop A is 140 – 70 – 30 = 40

Shop	Number of volleyballs sold	Number of footballs sold	Number of basketballs sold
A	30	70	40
B	60	50	70
C	50	30	70
D	40	120	40
E	40	70	50

Calculation

Number of volleyballs sold in shop E 40

Number of basket ball sold in shop E is 50

So, x = 50 - 40 = 10

So, total number of basketballs sold in shop D and E together is 40 + 50 = 90 = 9x

Q51. Answer: (d) 230

For shop A,

Let number of volleyball and football sold in shop A is 3x and 7x respectively.

So, difference between number of volleyball and football sold is 40

So, 7x – 3x = 40

Or, 4x = 40

Or, x = 40 / 4 = 10

So, Number of volleyballs sold in shop A is 3 × 10 = 30

Number of footballs sold in shop A is 7 × 10 = 70

Number of basketballs sold in shop A is 140 – 70 – 30 = 40

Shop	Number of volleyballs sold	Number of footballs sold	Number of basketballs sold
A	30	70	40
B	60	50	70
C	50	30	70
D	40	120	40
E	40	70	50

Calculation

Sum of football sold in shop A and B is 70 + 50 = 120

Sum of volleyball sold in shop B and C is 60 +50 = 110

So, m = 120 and n = 110

So, m + n = 120 + 110 = 230

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Q52. Answer: (b) 96

For shop A,

Let number of volleyball and football sold in shop A is 3x and 7x respectively.

So, difference between number of volleyball and football sold is 40

So, 7x – 3x = 40

Or, 4x = 40

Or, x = 40 / 4 = 10

So, Number of volleyballs sold in shop A is 3 × 10 = 30

Number of footballs sold in shop A is 7 × 10 = 70

Number of basketballs sold in shop A is 140 – 70 – 30 = 40

Shop	Number of volleyballs sold	Number of footballs sold	Number of basketballs sold
A	30	70	40
B	60	50	70
C	50	30	70
D	40	120	40
E	40	70	50

Calculation:

Number of balls sold in shop F is 160 × [100 + 20] /100 = 192

Number of volleyball and basketball sold in shop F is 192 × 50/100 = 96

Q53. Answer: (a) 165

For shop A,

Let number of volleyball and football sold in shop A is 3x and 7x respectively.

So, difference between number of volleyball and football sold is 40

So, 7x – 3x = 40

Or, 4x = 40

Or, x = 40 / 4 = 10

So, Number of volleyballs sold in shop A is 3 × 10 = 30

Number of footballs sold in shop A is 7 × 10 = 70

Number of basketballs sold in shop A is 140 – 70 – 30 = 40

Shop	Number of volleyballs sold	Number of footballs sold	Number of basketballs sold
A	30	70	40
B	60	50	70
C	50	30	70
D	40	120	40
E	40	70	50

Calculation:

Number of bat sold in shop D is 120 × 3 /4 = 90

Number of bat sold in shop B is 50 × 3 /2 = 75

So, total number of bats sold in shop B and D together is 90 + 75 = 165

Q54. Answer: (c) 295

Concept used :

Follow the BODMAS rule according to the table given below:

Calculation:

=> 79.96% of 200.20 + 50.10 x 3.11 = ? + 25.20% of 60.13

=> 80/100 x 200 + 50 x 3 = ? + 25/100 x 60

=> 160 + 150 = ? + 15

=> 310 = ? + 15

=> ? = 295

Hence, the correct answer is option 3.

Q55. Answer: (e) • 45

Follow BODMAS rule to solve this question, as per the order given below.

Step - 1: Parts of an equation enclosed in 'Brackets' must be solved first, and following BODMAS rule in the bracket -

Step - 2: Any mathematical 'Of' or 'Exponent' must be solved next.

Step - 3: Next, the parts of the equation that contain 'Division' and 'Multiplication' are calculated.

Step - 4: Last but not the least, the parts of the equation that contain 'Addition' and 'Subtraction' should be calculated.

Since, we need to find out the approximate value, we can write these values to their nearest integers.

Given expression is

38.98 ÷ 12.99 × 16.97 + 43.94 = ? + 99.99 ÷ 4.97 × 6.98

=> 39 ÷ 13 × 17 + 44 = ? + 100 ÷ 5 × 7

=> 3 × 17 + 44 = ? + 20 × 7

=> 51 + 44 = ? + 140

=> 95 = ? + 140

=> 95 - 140 = ?

=> ? = - 45

Hence, -45 will come in the place of (?).

Q56. Answer: (e) • 450

Follow BODMAS rule to solve this question, as per the order given below.

Step - 1: Parts of an equation enclosed in 'Brackets' must be solved first, and following BODMAS rule in the bracket -

Step - 2: Any mathematical 'Of' or 'Exponent' must be solved next.

Step - 3: Next, the parts of the equation that contain 'Division' and 'Multiplication' are calculated.

Step - 4: Last but not the least, the parts of the equation that contain 'Addition' and 'Subtraction' should be calculated.

Since, we need to find out the approximate value, we can write these values to their nearest integers.

Given expression is

49.99 + ? ÷ 15.01 + 230.05 + 14.98% of 599.99 = 340.08

=> 50 + ? ÷ 15 + 230 + 15% of 600 = 340

=> 50 + ? ÷ 15 + 230 + 90 = 340

=> ? ÷ 15 + 370 = 340

=> ? ÷ 15 = - 30

=> ? = - 30 x 15

=> ? = -450

Hence, -450 will come in the place of (?).

Q57. Answer: (b) Rs. 11600

Shortcut Trick

Ratio of CI Amounts: $[12000 \times (1 + r)^2] \div [10000 \times (1 + r)^3] = 12/11$

$1.2 \div (1 + r) = 12/11 \Rightarrow 1 + r = 1.1 \Rightarrow r = 10\%$

New SI Rate = 10% + 5% = 15%

SI Amount = 8000 + (8000 × 15% × 3) = 8000 + 3600 = 11600

Therefore The correct answer is Rs. 11600.

Alternate Method

Given: P1 = Rs. 12000, T1 = 2 years, P2 = Rs. 10000, T2 = 3 years, Ratio of Amounts = 12:11, New P = Rs. 8000, New T = 3 years, New Rate = (x + 5)%.

Formula Used: Amount (CI) = $P(1 + r/100)^n$; Amount (SI) = P + (P × r × t)/100

=> $[12000(1 + x/100)^2] / [10000(1 + x/100)^3] = 12 / 11$

=> [1.2] / [1 + x/100] = 12 / 11

=> 1 + x/100 = (1.2 × 11) / 12 = 1.1

=> x/100 = 0.1 => x = 10%

=> New Rate = 10 + 5 = 15%

=> SI = (8000 × 15 × 3) / 100 = 3600

=> Total Amount = 8000 + 3600 = 11600

Therefore The correct answer is Rs. 11600.

Additional Information

CI Amount Formula

The amount in Compound Interest is given by $A = P(1 + r/100)^n$, where n is the number of conversion periods.

SI Amount Formula

The amount in Simple Interest is A = P + SI = P(1 + rt/100), where interest is calculated only on the principal.

Successive Ratio in CI

The ratio of amounts for successive years (n and n+1) in CI is always (1 + r/100).

Q58. Answer: (d) 60

Shortcut Trick

Ratio of A : B is 4 : 5. After x years, it becomes 5 : 6. Difference in parts (5−4 = 1, 6−5 = 1) is same, so 1 unit = x.

Ratio of B : C is 5 : 3. Before y years, it was 3 : 1. Difference in parts (5−3 = 2, 3−1 = 2) is same, so 2 units = y.

Given y = x + 5 => 2 units = 1 unit + 5 => 1 unit = 5 years.

Sum of present ages (4 + 5 + 3) = 12 units = 12 × 5 = 60 years.

Therefore The correct answer is 60 years.

Alternate Method

Given: Ratio of present ages A : B : C = 4 : 5 : 3. Let common factor be k.

Formula: Ratio = (Initial age ± change) / (Initial age ± change)

=> For A and B: (4k + x) / (5k + x) = 5 / 6

=> 24k + 6x = 25k + 5x => x = k

=> For B and C: (5k − y) / (3k − y) = 3 / 1

=> 5k − y = 9k − 3y => 2y = 4k => y = 2k

=> Given y = x + 5 => 2k = k + 5 => k = 5

=> Sum of present ages = 4k + 5k + 3k = 12k

=> Total Age = 12 × 5 = 60 years

Therefore The correct answer is 60 years.

Additional Information

Ratio Difference Method

When the same quantity is added or subtracted from both terms of a ratio, the difference between the ratio terms must be made equal to maintain proportionality.

Age Problems Property

The difference between the ages of two people always remains constant, regardless of how many years pass or have passed.

Q59. Answer: (c) 5

Shortcut Trick

Time taken for the second half of the journey = 420 ÷ 140 = 3 hours.

Remaining time for the first half of the journey = 6.5 − 3 = 3.5 hours.

Speed p = 420 ÷ 3.5 = 120 km/hr.

Time taken to cover 600 km at 120 km/hr = 600 ÷ 120 = 5 hours.

Therefore The correct answer is 5 hours.

Alternate Method

Given: First distance = 420 km, Speed = p km/hr; Second distance = 420 km, Speed = 140 km/hr; Total time = 6 hours 30 minutes = 6.5 hours.

Formula Used: Time = Distance ÷ Speed

=> Total Time = Time1 + Time2

=> 6.5 = (420 ÷ p) + (420 ÷ 140)

=> 6.5 = (420 ÷ p) + 3

=> 420 ÷ p = 3.5

=> p = 420 ÷ 3.5 = 120 km/hr

=> Time taken to cover 600 km at speed p = 600 ÷ 120 = 5 hours

Therefore The correct answer is 5 hours.

Additional Information

Average Speed for Equal Distances

When a body travels equal distances at speeds x and y, the average speed is given by 2xy ÷ (x + y).

Unit Conversion

To convert speed from km/hr to m/s, multiply by 5/18. To convert from m/s to km/hr, multiply by 18/5.

Q60. Answer: (b) 13%

Shortcut Trick

Profit = 1.5001 × Discount ≈ 1.5 × 1920.25 ≈ 2880.57.

Profit% ≈ 29.85% => CP = Profit ÷ 0.2985 ≈ 2880.57 ÷ 0.2985 ≈ 9650.

SP = CP + Profit ≈ 9650 + 2880.57 ≈ 12530.57.

MP = SP + Discount ≈ 12530.57 + 1920.25 ≈ 14450.82.

Discount% = (Discount ÷ MP) × 100 ≈ (1920.25 ÷ 14450.82) × 100 ≈ 13.28%.

Therefore The correct answer is 13%.

Alternate Method

Given → Discount (D) ≈ 1920.25, Profit% (P%) ≈ 29.85%, Profit (P) ≈ 1.5001 × D.

Formulas: P = SP − CP | P% = (P ÷ CP) × 100 | MP = SP + D | Discount% = (D ÷ MP) × 100.

=> Profit = 1920.25 + (50.01% of 1920.25) ≈ 1920.25 + 960.32 = 2880.57.

=> CP = (Profit ÷ Profit%) × 100 ≈ (2880.57 ÷ 29.85) × 100 ≈ 9650.15.

=> SP = CP + Profit ≈ 9650.15 + 2880.57 = 12530.72.

=> MP = SP + Discount ≈ 12530.72 + 1920.25 = 14450.97.

=> Discount% = (1920.25 ÷ 14450.97) × 100 ≈ 13.287%.

Therefore The correct answer is 13%.

Additional Information

Marked Price & Discount

Discount is always calculated on the Marked Price (MP). MP = SP + Discount.

Profit Calculation

Profit is always calculated on the Cost Price (CP) unless stated otherwise. SP = CP + Profit.

Q61. Answer: (a) 8

Shortcut Trick

Ratio of investments of A, B, and C is 2800 : 3600 : 4000 = 7 : 9 : 10.

Profit ratio = Investment × Time. Let C stay for x months.

Ratio of Profit (A : B : C) = (7 × 12) : (9 × 12) : (10 × x) = 84 : 108 : 10x.

Total Profit = 84 + 108 + 10x = 192 + 10x.

Given: C's share / Total share = 10x / (192 + 10x) = 5 / 17.

Solving: 170x = 5(192 + 10x) => 170x = 960 + 50x => 120x = 960 => x = 8.

Therefore The correct answer is 8 months.

Alternate Method

Given → Investment of A = Rs. 2800, B = Rs. 3600, C = Rs. 4000. Time for A and B = 12 months. Time for C = x months.

Formulas: Profit Ratio = (I1 × T1) : (I2 × T2) : (I3 × T3) | Profit Share% = (Individual Profit / Total Profit) × 100

=> Profit A = 2800 × 12 = 33600

=> Profit B = 3600 × 12 = 43200

=> Profit C = 4000 × x = 4000x

=> Total Profit = 33600 + 43200 + 4000x = 76800 + 4000x

=> According to question: 4000x / (76800 + 4000x) = 5 / 17

=> 800x / (15360 + 800x) = 5 / 17 (Dividing numerator and denominator by 5)

=> 13600x = 5 × 15360 + 4000x

=> 9600x = 76800

=> x = 768 / 96 = 8.

Therefore The correct answer is 8.

Additional Information

Partnership Basics

When time periods are different, the profit is distributed in the ratio of the product of capital and time (Investment × Time).

Ratio of Profit

If P is profit, I is investment, and T is time, then P1 : P2 = (I1 × T1) : (I2 × T2).

Q62. Answer: (c) R + 12

Shortcut Trick

Combined efficiency (A+B) = 1/12 and (A+B+C) = 1/6.

Efficiency of C = (A+B+C) − (A+B) = 1/6 − 1/12 = 1/12.

Time taken by C alone = 12 days. Given C = R + 8 => R = 4.

Efficiency of A = (3/4) × Efficiency of (A+B) = (3/4) × (1/12) = 1/16.

Time taken by A = 16 days = 4 + 12 = R + 12 days.

Therefore The correct answer is R + 12 days.

Alternate Method

Person	Days	Total Work	Efficiency
A + B	12	12	1
A + B + C	6	2	

Given: Efficiency ratio A : B = 3 : 1.

=> Efficiency of C = (A+B+C) − (A+B) = 2 − 1 = 1 unit/day.

=> Time taken by C alone = Total Work ÷ Efficiency = 12 ÷ 1 = 12 days.

=> According to question, C takes R + 8 days Therefore R + 8 = 12 => R = 4.

=> Total efficiency of (A+B) = 1 unit/day. Dividing in ratio 3 : 1:

=> Efficiency of A = 1 × (3 ÷ (3+1)) = 3/4 = 0.75 units/day.

=> Time taken by A alone = 12 ÷ 0.75 = 16 days.

=> Expressing 16 in terms of R: 16 = 4 + 12 = R + 12.

Therefore The correct answer is R + 12 days.

Additional Information

Efficiency and Time Relationship

Efficiency is inversely proportional to the time taken to complete a work. If the ratio of efficiency is x:y, the ratio of time taken is y:x.

Work and Wages

Wages are always distributed in the ratio of the work done or in the ratio of efficiencies if all persons work for the same duration.

Pipes and Cisterns

This concept follows the same logic as Time and Work, where an inlet pipe has positive efficiency and an outlet pipe has negative efficiency.

Q63. Answer: (a) 164

Difference between number of male teachers in school A and B is 10.

Ratio of number of male teachers in school A and B is 4:5.

So, we can say number of male teachers in school A is 4 × 10 = 40

Number of female teachers in school B is 5 ×10 = 50

Number of female teachers in school A is 40 + 4 = 44

Number of female teacher in school B is 50 × 13 /10 = 65

Number of male teachers in school C is 44 + 4 = 48

Number of female teachers in school C is 50 + 2 = 52

School	Number of male teacher	Number of female teacher
A	40	44
B	50	65
C	48	52

Calculation

Total number of teacher in school A and B together is 40 + 44 + 50 +65 = 199 = m +35

So, m = 199 -35 = 164

Q64. Answer: (e) 0

Difference between number of male teachers in school A and B is 10.

Ratio of number of male teachers in school A and B is 4:5.

So, we can say number of male teachers in school A is 4 × 10 = 40

Number of female teachers in school B is 5 ×10 = 50

Number of female teachers in school A is 40 + 4 = 44

Number of female teacher in school B is 50 × 13 /10 = 65

Number of male teachers in school C is 44 + 4 = 48

Number of female teachers in school C is 50 + 2 = 52

School	Number of male teacher	Number of female teacher
A	40	44
B	50	65
C	48	52

Calculation

Number of females married teacher in school B is 65 ×20/100 = 13

Number of females married teacher in school C is 52 ×25/100 = 13

So, required difference is 13 -13 = 0

Q65. Answer: (b) 84

Difference between number of male teachers in school A and B is 10.

Ratio of number of male teachers in school A and B is 4:5.

So, we can say number of male teachers in school A is 4 × 10 = 40

Number of female teachers in school B is 5 ×10 = 50

Number of female teachers in school A is 40 + 4 = 44

Number of female teacher in school B is 50 × 13 /10 = 65

Number of male teachers in school C is 44 + 4 = 48

Number of female teachers in school C is 50 + 2 = 52

School	Number of male teacher	Number of female teacher
A	40	44
B	50	65
C	48	52

Calculation

Total number of male teacher in school C and D is 41 × 2 = 82

Number of male teacher in school D is 82 – 48 = 34

So, total number male teacher in school B and D is 50 + 34 = 84

Q66. Answer: (a) 14

Difference between number of male teachers in school A and B is 10.

Ratio of number of male teachers in school A and B is 4:5.

So, we can say number of male teachers in school A is 4 × 10 = 40

Number of female teachers in school B is 5 ×10 = 50

Number of female teachers in school A is 40 + 4 = 44

Number of female teacher in school B is 50 × 13 /10 = 65

Number of male teachers in school C is 44 + 4 = 48

Number of female teachers in school C is 50 + 2 = 52

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School	Number of male teacher	Number of female teacher
A	40	44
B	50	65
C	48	52

Calculation

Number of male sub staff in school B is 50 × 12/100 =6

Number of female sub staff in school B is 6 + 8 = 14

Q67. Answer: (c) 40.66

Difference between number of male teachers in school A and B is 10.

Ratio of number of male teachers in school A and B is 4:5.

So, we can say number of male teachers in school A is 4 × 10 = 40

Number of female teachers in school B is 5 ×10 = 50

Number of female teachers in school A is 40 + 4 = 44

Number of female teacher in school B is 50 × 13 /10 = 65

Number of male teachers in school C is 44 + 4 = 48

Number of female teachers in school C is 50 + 2 = 52

School	Number of male teacher	Number of female teacher
A	40	44
B	50	65
C	48	52

Calculation

Total age of all the teacher of school A is 48 × 40 + 44 × 34 = 3416

So, average age of teacher of school A is 3416 / 84 = 40.66

Q68. Answer: (a) 21

Shortcut Trick

Net change in total marks = (Sum of marks added) − (Sum of marks left)

Net change = 72.5 − (50.5 + 54.5) = 72.5 − 105 = −32.5

Let current number of students be n. Then initial students were n + 1 (as 2 left and 1 joined).

Total change = (New Avg × n) − (Old Avg × (n + 1)) => −32.5 = (65.5 × n) − (64 × (n + 1))

−32.5 = 1.5n − 64 => 1.5n = 31.5 => n = 21

Therefore The correct answer is 21 students.

Alternate Method

Given: Initial Average = 64, Marks of leaving students = 50.5 and 54.5, Marks of joining student = 72.5, Average increase = 1.5.

Formula: Total = Average × Number of items

Let current number of students be x.

Number of students initially = x + 1 (Since 2 left and 1 joined, net change is −1).

=> Initial Total = 64 × (x + 1)

=> New Total = (64 + 1.5) × x = 65.5x

=> New Total = Initial Total − 50.5 − 54.5 + 72.5

=> 65.5x = 64(x + 1) − 105 + 72.5

=> 65.5x = 64x + 64 − 32.5

=> 65.5x − 64x = 31.5

=> 1.5x = 31.5

=> x = 31.5 ÷ 1.5 = 21

Therefore The correct answer is 21 students.

Additional Information

Concept of Deviation

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Net Change in Total = (Sum of added values − Sum of removed values). This net change is distributed among all current members to find the change in average.

Weighted Average

When two groups are combined, the combined average is (n1A1 + n2A2) ÷ (n1 + n2).

Inclusion and Exclusion

When a person joins, New Average × New Total Count = Old Average × Old Total Count + New Member Value.

Q69. Answer: (b) 100

Shortcut Trick

Perimeter equality: 4 × (a + 10) = 2 × (3a + a)

4a + 40 = 8a => 4a = 40 => a = 10

Square side = 20; Rectangle = 30 × 10

Difference = |20^2 − (30 × 10)| = |400 − 300| = 100

Therefore The correct answer is 100 sq. units.

Alternate Method

Given: Side of square = a + 10, Length of rectangle (L) = 3a, Breadth (B) = a.

Formula: Perimeter of square = 4 × side; Perimeter of rectangle = 2(L + B).

=> 4(a + 10) = 2(3a + a)

=> 4a + 40 = 2(4a)

=> 4a + 40 = 8a

=> 4a = 40 => a = 10

=> Side of square = 10 + 10 = 20 units

=> Dimensions of rectangle = 30 units and 10 units

=> Area of square = 20 × 20 = 400 sq. units

=> Area of rectangle = 30 × 10 = 300 sq. units

=> Difference = 400 − 300 = 100 sq. units

Therefore The correct answer is 100 sq. units.

Additional Information

Square Properties

Area = $side^2$ and Perimeter = 4 × side. All sides are equal and angles are 90°.

Rectangle Properties

Area = length × breadth and Perimeter = 2(length + breadth).

Isoperimetric Theorem

For a given perimeter, a square has a larger area than any other rectangle.

Q70. Answer: (d) 12

Shortcut Trick

Let Upstream speed be x km/hr. Then Downstream speed = x + 2 × Stream speed = x + 6 km/hr.

Time difference = 72/x − 72/(x + 6) = 2 hours.

Test options: If x = 12, then 72/12 − 72/18 = 6 − 4 = 2 hours. Condition satisfied.

Therefore The correct answer is 12 km/hr.

Alternate Method

Given: Distance = 72 km, Speed of stream (v) = 3 km/hr, Time difference = 2 hours.

Formula: Time = Distance ÷ Speed

=> Let Speed of boat in still water = u km/hr.

=> Upstream speed = (u − 3) km/hr and Downstream speed = (u + 3) km/hr.

=> 72/(u − 3) − 72/(u + 3) = 2

=> 36 × [(u + 3) − (u − 3)] / [(u − 3)(u + 3)] = 1

=> 36 × 6 = u^2 − 9

=> 216 + 9 = u^2 => u^2 = 225 => u = 15 km/hr.

=> Upstream speed = u − 3 = 15 − 3 = 12 km/hr.

Therefore The correct answer is 12 km/hr.

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Additional Information

Downstream and Upstream Speed

Downstream speed (D) = u + v and Upstream speed (U) = u − v, where u is boat speed and v is stream speed.

Speed of Boat in Still Water

Boat speed (u) = (D + U) ÷ 2.

Speed of Current

Stream speed (v) = (D − U) ÷ 2.

Q71. Answer: (c) G

1) Less than four persons sits to the right of G.

2) D sits third from the right end.

3) Only two persons sits between B and H, who is an immediate neighbour of G.

4) B and A are immediate neighbour of J.

5) H sits to the left of C. Therefore, case 2 and case 3 are eliminated.

6) Number of persons sits to the left of E is one less than right of F, who doesn't sits at any extreme end. Hence, the final arrangement is as follows

Hence, correct answer is option 3.

Q72. Answer: (e) Both 2 and 4.

1) Less than four persons sits to the right of G.

2) D sits third from the right end.

3) Only two persons sits between B and H, who is an immediate neighbour of G.

4) B and A are immediate neighbour of J.

5) H sits to the left of C. Therefore, case 2 and case 3 are eliminated.

6) Number of persons sits to the left of E is one less than right of F, who doesn't sits at any extreme end. Hence, the final arrangement is as follows

Hence, correct answer is option 5.

Q73. Answer: (d) JD

1) Less than four persons sits to the right of G.

2) D sits third from the right end.

3) Only two persons sits between B and H, who is an immediate neighbour of G.

4) B and A are immediate neighbour of J.

5) H sits to the left of C. Therefore, case 2 and case 3 are eliminated.

6) Number of persons sits to the left of E is one less than right of F, who doesn't sits at any extreme end. Hence, the final arrangement is as follows

Except JD pair in all other first person is second to the left of first person where in JD, J is fourth left of D.

Hence, correct answer is option 4.

Q74. Answer: (d) EC

1) Less than four persons sits to the right of G.

2) D sits third from the right end.

3) Only two persons sits between B and H, who is an immediate neighbour of G.

4) B and A are immediate neighbour of J.

5) H sits to the left of C. Therefore, case 2 and case 3 are eliminated.

6) Number of persons sits to the left of E is one less than right of F, who doesn't sits at any extreme end. Hence, the final arrangement is as follows

Hence, correct answer is option 4.

Q75. Answer: (a) D

1) Less than four persons sits to the right of G.

2) D sits third from the right end.

3) Only two persons sits between B and H, who is an immediate neighbour of G.

4) B and A are immediate neighbour of J.

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5) H sits to the left of C. Therefore, case 2 and case 3 are eliminated.

6) Number of persons sits to the left of E is one less than right of F, who doesn't sits at any extreme end. Hence, the final arrangement is as follows

Hence, correct answer is option 1.

Q76. Answer: (d) O - Blue

1) Atmost two boxes are placed above O.

2) Box which contains purple colour placed immediately below box O.

3) The box which contains purple colour is placed immediately above and below the box which contains Blue and Red colour.

Case – 1	**Case – 2**	**Case – 3**			
Box	Colour	Box	Colour	Box	Colour
				O	Blue / Red
		O	Blue / Red		Purple
O	Blue / Red		Purple		Red / Blue
	Purple		Red / Blue		
	Red / Blue				

4) Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. So case 3 is eliminated since we cannot place White colour box above Red colour box.

5) As many boxes above box L as many below it.

Case – 1	**Case – 2**		
Box	Colour	Box	Colour
			White
	White	O	Blue
O	Blue		Purple
L	Purple	L	Red
	Red		

6) As many boxes above box B as many below box S, which contains Grey colour.

7) Box B is immediately below the box which contains Orange colour.

8) Box G is placed above box K, which contains Black colour.

9) There is three box placed between R and G where R is above G.

Hence, the final arrangement is as follows

Box	**Colour**
R	Orange
B	White
O	Blue
L	Purple
G	Red
S	Grey
K	Black

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Hence, correct answer is option 4.

Q77. Answer: (e) RG

1) Atmost two boxes are placed above O.

2) Box which contains purple colour placed immediately below box O.

3) The box which contains purple colour is placed immediately above and below the box which contains Blue and Red colour.

Case – 1	Case – 2	Case – 3			
Box	Colour	Box	Colour	Box	Colour
				O	Blue / Red
		O	Blue / Red		Purple
O	Blue / Red		Purple		Red / Blue
	Purple		Red / Blue		
	Red / Blue				

4) Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. So case 3 is eliminated since we cannot place White colour box above Red colour box.

5) As many boxes above box L as many below it.

Case – 1	Case – 2		
Box	Colour	Box	Colour
			White
	White	O	Blue
O	Blue		Purple
L	Purple	L	Red
	Red		

6) As many boxes above box B as many below box S, which contains Grey colour.

7) Box B is immediately below the box which contains Orange colour.

8) Box G is placed above box K, which contains Black colour.

9) There is three box placed between R and G where R is above G.

Hence, the final arrangement is as follows

Box	Colour
R	Orange
B	White
O	Blue
L	Purple
G	Red
S	Grey
K	Black

All except option 5 has one box between them so correct answer is option 5.

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Q78. Answer: (b) Purple

1) Atmost two boxes are placed above O.

2) Box which contains purple colour placed immediately below box O.

3) The box which contains purple colour is placed immediately above and below the box which contains Blue and Red colour.

Case – 1	Case – 2	Case – 3			
Box	Colour	Box	Colour	Box	Colour
				O	Blue / Red
		O	Blue / Red		Purple
O	Blue / Red		Purple		Red / Blue
	Purple		Red / Blue		
	Red / Blue				

4) Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. So case 3 is eliminated since we cannot place White colour box above Red colour box.

5) As many boxes above box L as many below it.

Case – 1	Case – 2		
Box	Colour	Box	Colour
			White
	White	O	Blue
O	Blue		Purple
L	Purple	L	Red
	Red		

6) As many boxes above box B as many below box S, which contains Grey colour.

7) Box B is immediately below the box which contains Orange colour.

8) Box G is placed above box K, which contains Black colour.

9) There is three box placed between R and G where R is above G.

Hence, the final arrangement is as follows

Box	Colour
R	Orange
B	White
O	Blue
L	Purple
G	Red
S	Grey
K	Black

Hence, correct answer is option 2.

Q79. Answer: (e) None

1) Atmost two boxes are placed above O.

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2) Box which contains purple colour placed immediately below box O.

3) The box which contains purple colour is placed immediately above and below the box which contains Blue and Red colour.

Case – 1	Case – 2	Case – 3			
Box	Colour	Box	Colour	Box	Colour
				O	Blue / Red
		O	Blue / Red		Purple
O	Blue / Red		Purple		Red / Blue
	Purple		Red / Blue		
	Red / Blue				

4) Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. So case 3 is eliminated since we cannot place White colour box above Red colour box.

5) As many boxes above box L as many below it.

Case – 1	Case – 2		
Box	Colour	Box	Colour
			White
	White	O	Blue
O	Blue		Purple
L	Purple	L	Red
	Red		

6) As many boxes above box B as many below box S, which contains Grey colour.

7) Box B is immediately below the box which contains Orange colour.

8) Box G is placed above box K, which contains Black colour.

9) There is three box placed between R and G where R is above G.

Hence, the final arrangement is as follows

Box	Colour
R	Orange
B	White
O	Blue
L	Purple
G	Red
S	Grey
K	Black

Hence, correct answer is option 5.

Q80. Answer: (d) G

1) Atmost two boxes are placed above O.

2) Box which contains purple colour placed immediately below box O.

3) The box which contains purple colour is placed immediately above and below the box which contains Blue and Red colour.

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Case – 1	Case – 2	Case – 3			
Box	Colour	Box	Colour	Box	Colour
				O	Blue / Red
		O	Blue / Red		Purple
O	Blue / Red		Purple		Red / Blue
	Purple		Red / Blue		
	Red / Blue				

4) Two boxes are placed between the box which contain Red and that of White colour, which is placed above Red colour box. So case 3 is eliminated since we cannot place White colour box above Red colour box.

5) As many boxes above box L as many below it.

Case – 1	Case – 2		
Box	Colour	Box	Colour
			White
	White	O	Blue
O	Blue		Purple
L	Purple	L	Red
	Red		

6) As many boxes above box B as many below box S, which contains Grey colour.

7) Box B is immediately below the box which contains Orange colour.

8) Box G is placed above box K, which contains Black colour.

9) There is three box placed between R and G where R is above G.

Hence, the final arrangement is as follows

Box	Colour
R	Orange
B	White
O	Blue
L	Purple
G	Red
S	Grey
K	Black

Hence, correct answer is option 4.

Q81. Answer: (c) R

The given word is RECLAIMING.

Chosen letters are R, E, M, G

Meaningful Word - GERM

so second letter from right end is R

Hence, Correct answer is R.

Q82. Answer: (e) Both I and II is true

Given statements: L = M, F ≤ D, K ≥ L, M ≤ F

By combining: K ≥ L = M ≤ F ≤ D

Conclusions:

I. M ≤ K → True (as K ≥ L = M)

II. D ≥ M → True (as M ≤ F ≤ D)

Hence, both I and II are True.

Q83. Answer: (c) Only II is True

Given statements: P ≥ Q, R > S, R ≥ Q, L = P < T

By combining: L = P ≥ Q ≤ R > S, P < T

Conclusions:

I. R > P → False (as P ≥ Q ≤ R → thus clear relation between R and P cannot be determined)

II. T > Q → True (as T > P ≥ Q)

Hence, only II is True.

Q84. Answer: (a) None is true

Given statements: A ≥ B ≥ C; C < D < E; E ≥ F ≥ G; G < H > I

On combining: A ≥ B ≥ C < D < E ≥ F ≥ G < H > I

Conclusions:

I. A > I → False (as A ≥ B ≥ C < D < E ≥ F ≥ G < H > I → therefore we cannot determine the relation between A and I)

II. D < F → False (as A ≥ B ≥ C < D < E ≥ F ≥ G < H > I → therefore we cannot determine the relation between D and F)

III. F > I → False (as A ≥ B ≥ C < D < E ≥ F ≥ G < H > I → therefore we cannot determine the relation between F and I)

Hence, none is true.

Q85. Answer: (e) Both A and B

1) U lives on odd number floor but not adjacent to Y.

2) Y lives below U.

3) I lives just below E's floor but not in the same flat.

Floor	Case – 1	Case – 2	Case – 3	Case – 4				
Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	
3	U	E	U			U	E	U
2	I			E	E			I
1	Y		I	Y	Y	I		Y

4) As many person lives below U as many person lives above I. So, case 1 and case 4 are eliminated.

5) M lives immediate below floor O but does not live just below.

Floor	Case – 2	Case – 3		
Flat P	Flat Q	Flat P	Flat Q	
3	U	O	O	U
2	M	E	E	M
1	I	Y	Y	I

6) O does not lives to west of any person. So case – 3 is also eliminated.

Hence, correct arrangement is as follows

Floor	Flat P	Flat Q
3	U	O
2	M	E
1	I	Y

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Here, O lives above E in Flat Q. Y lives to the east of I but U does not lives to the Southwest of I.
Hence, Correct answer is Both Statement A & B.

Q86. Answer: (a) U - Flat P.

1) U lives on odd number floor but not adjacent to Y.
2) Y lives below U.
3) I lives just below E's floor but not in the same flat.

Floor	Case – 1	Case – 2	Case – 3	Case – 4				
Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	
3	U	E	U			U	E	U
2	I			E	E			I
1	Y		I	Y	Y	I		Y

4) As many person lives below U as many person lives above I. So, case 1 and case 4 are eliminated.
5) M lives immediate below floor O but does not live just below.

Floor	Case – 2	Case – 3		
Flat P	Flat Q	Flat P	Flat Q	
3	U	O	O	U
2	M	E	E	M
1	I	Y	Y	I

6) O does not lives to west of any person. So case – 3 is also eliminated.
Hence, correct arrangement is as follows

Floor	Flat P	Flat Q
3	U	O
2	M	E
1	I	Y

Hence, U lives in Flat P.

Q87. Answer: (c) E

1) U lives on odd number floor but not adjacent to Y.
2) Y lives below U.
3) I lives just below E's floor but not in the same flat.

Floor	Case – 1	Case – 2	Case – 3	Case – 4				
Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	
3	U	E	U			U	E	U
2	I			E	E			I
1	Y		I	Y	Y	I		Y

4) As many person lives below U as many person lives above I. So, case 1 and case 4 are eliminated.
5) M lives immediate below floor O but does not live just below.

Floor	Case – 2	Case – 3		
Flat P	Flat Q	Flat P	Flat Q	
3	U	O	O	U
2	M	E	E	M
1	I	Y	Y	I

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6) O does not lives to west of any person. So case – 3 is also eliminated.

Hence, correct arrangement is as follows

Floor	Flat P	Flat Q
3	U	O
2	M	E
1	I	Y

All except E lives in odd number floor.

Hence, E is odd one out.

Q88. Answer: (e) Both 3 and 4.

1) U lives on odd number floor but not adjacent to Y.

2) Y lives below U.

3) I lives just below E's floor but not in the same flat.

Floor	Case – 1	Case – 2	Case – 3	Case – 4				
Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	
3	U	E	U			U	E	U
2	I			E	E			I
1	Y		I	Y	Y	I		Y

4) As many person lives below U as many person lives above I. So, case 1 and case 4 are eliminated.

5) M lives immediate below floor O but does not live just below.

Floor	Case – 2	Case – 3		
Flat P	Flat Q	Flat P	Flat Q	
3	U	O	O	U
2	M	E	E	M
1	I	Y	Y	I

6) O does not lives to west of any person. So case – 3 is also eliminated.

Hence, correct arrangement is as follows

Floor	Flat P	Flat Q
3	U	O
2	M	E
1	I	Y

Here M lives to the west of E and I lives below O.

Hence, Correct answer is Both 3 and 4.

Q89. Answer: (d) E

1) U lives on odd number floor but not adjacent to Y.

2) Y lives below U.

3) I lives just below E's floor but not in the same flat.

Floor	Case – 1	Case – 2	Case – 3	Case – 4				
Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	Flat P	Flat Q	
3	U	E	U			U	E	U
2	I			E	E			I
1	Y		I	Y	Y	I		Y

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4) As many person lives below U as many person lives above I. So, case 1 and case 4 are eliminated.

5) M lives immediate below floor O but does not live just below.

Floor	Case – 2	Case – 3		
Flat P	Flat Q	Flat P	Flat Q	
3	U	O	O	U
2	M	E	E	M
1	I	Y	Y	I

6) O does not lives to west of any person. So case – 3 is also eliminated.

Hence, correct arrangement is as follows

Floor	Flat P	Flat Q
3	U	O
2	M	E
1	I	Y

Hence, E lives in Flat Q of Floor 2.

Q90. Answer: (e) More than Five

Given number: 5682937

There are six such pairs formed

In forward direction three pairs 56, 69, 59 and

In backward direction three pairs 13, 79, 25.

Hence correct answer is More than five pair.

Q91. Answer: (b) As many person born before Ankush as many person after Nidhi.

1) Atmost two person born before Kritika.

2) Nidhi born in a leap year.

3) As many person born before Kritika as after Arpita.

Year	Age	Case – 1	Case – 2	Case – 3
Person	Person	Person		
1983	42			Kritika
1987	38		Kritika	
1995	30	Kritika		
1998	27			
2004	21	Nidhi	Nidhi	Nidhi
2007	18	Arpita		
2011	14		Arpita	
2014	11			Arpita

5) Aarav's age is a prime number. So, case 3 is eliminated because we cannot place Aarav at any place.

6) Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita.

7) As many person born between Ram and Ankush as many person between Ankush and Arpita.

Year	Age	Case – 1	Case – 2
Person	Person		
1983	42		Ram
1987	38	Ram	Kritika

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1995	30	Kritika	
1998	27	Ankush	Ankush
2004	21	Nidhi	Nidhi
2007	18	Arpita	Aryan
2011	14	Aryan	Arpita
2014	11		

Since, In case – 2 Aryan is older than Arpita is follow the given condition but incase – 1, it is not follwoed so we eliminate case – 1. Therefore, the final arrangement is as follows

Year	Age	Person
1983	42	Ram
1987	38	Kritika
1995	30	Alisha
1998	27	Ankush
2004	21	Nidhi
2007	18	Aryan
2011	14	Arpita
2014	11	Aarav

Hence, people born before Ankush and after Nidhi is same.

Q92. Answer: (e) Nidhi

1) Atmost two person born before Kritika.

2) Nidhi born in a leap year.

3) As many person born before Kritika as after Arpita.

Year	Age	Case – 1	Case – 2	Case – 3
Person	Person	Person		
1983	42			Kritika
1987	38		Kritika	
1995	30	Kritika		
1998	27			
2004	21	Nidhi	Nidhi	Nidhi
2007	18	Arpita		
2011	14		Arpita	
2014	11			Arpita

5) Aarav's age is a prime number. So, case 3 is eliminated because we cannot place Aarav at any place.

6) Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita.

7) As many person born between Ram and Ankush as many person between Ankush and Arpita.

Year	Age	Case – 1	Case – 2
Person	Person		
1983	42		Ram
1987	38	Ram	Kritika
1995	30	Kritika	

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1998	27	Ankush	Ankush
2004	21	Nidhi	Nidhi
2007	18	Arpita	Aryan
2011	14	Aryan	Arpita
2014	11		

Since, In case – 2 Aryan is older than Arpita is follow the given condition but incase – 1, it is not follwoed so we eliminate case – 1. Therefore, the final arrangement is as follows

Year	Age	Person
1983	42	Ram
1987	38	Kritika
1995	30	Alisha
1998	27	Ankush
2004	21	Nidhi
2007	18	Aryan
2011	14	Arpita
2014	11	Aarav

Hence, all except Nidhi has age which is an even number.

Q93. Answer: (e) Alisha - 1995

1) Atmost two person born before Kritika.

2) Nidhi born in a leap year.

3) As many person born before Kritika as after Arpita.

Year	Age	Case – 1	Case – 2	Case – 3
Person	Person	Person		
1983	42			Kritika
1987	38		Kritika	
1995	30	Kritika		
1998	27			
2004	21	Nidhi	Nidhi	Nidhi
2007	18	Arpita		
2011	14		Arpita	
2014	11			Arpita

5) Aarav's age is a prime number. So, case 3 is eliminated because we cannot place Aarav at any place.

6) Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita.

7) As many person born between Ram and Ankush as many person between Ankush and Arpita.

Year	Age	Case – 1	Case – 2
Person	Person		
1983	42		Ram
1987	38	Ram	Kritika
1995	30	Kritika	
1998	27	Ankush	Ankush

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2004	21	Nidhi	Nidhi
2007	18	Arpita	Aryan
2011	14	Aryan	Arpita
2014	11		

Since, In case – 2 Aryan is older than Arpita is follow the given condition but incase – 1, it is not follwoed so we eliminate case – 1. Therefore, the final arrangement is as follows

Year	Age	Person
1983	42	Ram
1987	38	Kritika
1995	30	Alisha
1998	27	Ankush
2004	21	Nidhi
2007	18	Aryan
2011	14	Arpita
2014	11	Aarav

Hence, Alisha was born in 1995.

Q94. Answer: (d) Nidhi

1) Atmost two person born before Kritika.

2) Nidhi born in a leap year.

3) As many person born before Kritika as after Arpita.

Year	Age	Case – 1	Case – 2	Case – 3
Person	Person	Person		
1983	42			Kritika
1987	38		Kritika	
1995	30	Kritika		
1998	27			
2004	21	Nidhi	Nidhi	Nidhi
2007	18	Arpita		
2011	14		Arpita	
2014	11			Arpita

5) Aarav's age is a prime number. So, case 3 is eliminated because we cannot place Aarav at any place.

6) Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita.

7) As many person born between Ram and Ankush as many person between Ankush and Arpita.

Year	Age	Case – 1	Case – 2
Person	Person		
1983	42		Ram
1987	38	Ram	Kritika
1995	30	Kritika	
1998	27	Ankush	Ankush
2004	21	Nidhi	Nidhi

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2007	18	Arpita	Aryan
2011	14	Aryan	Arpita
2014	11		

Since, In case – 2 Aryan is older than Arpita is follow the given condition but incase – 1, it is not follwoed so we eliminate case – 1. Therefore, the final arrangement is as follows

Year	Age	Person
1983	42	Ram
1987	38	Kritika
1995	30	Alisha
1998	27	Ankush
2004	21	Nidhi
2007	18	Aryan
2011	14	Arpita
2014	11	Aarav

Hence, Nidhi born in a leap year which is 2004.

Q95. Answer: (b) Ankush

1) Atmost two person born before Kritika.

2) Nidhi born in a leap year.

3) As many person born before Kritika as after Arpita.

Year	Age	Case – 1	Case – 2	Case – 3
Person	Person	Person		
1983	42			Kritika
1987	38		Kritika	
1995	30	Kritika		
1998	27			
2004	21	Nidhi	Nidhi	Nidhi
2007	18	Arpita		
2011	14		Arpita	
2014	11			Arpita

4) Aarav's age is a prime number. So, case 3 is eliminated because we cannot place Aarav at any place.

5) Difference between age of Aryan and Arpita is a perfect square of least prime number where Aryan is older than Arpita.

6) As many person born between Ram and Ankush as many person between Ankush and Arpita.

Year	Age	Case – 1	Case – 2
Person	Person		
1983	42		Ram
1987	38	Ram	Kritika
1995	30	Kritika	
1998	27	Ankush	Ankush
2004	21	Nidhi	Nidhi
2007	18	Arpita	Aryan

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2011	14	Aryan	Arpita
2014	11		

Since, In case – 2 Aryan is older than Arpita is follow the given condition but in case – 1, it is not followed so we eliminate case – 1. Therefore, the final arrangement is as follows

Year	Age	Person
1983	42	Ram
1987	38	Kritika
1995	30	Alisha
1998	27	Ankush
2004	21	Nidhi
2007	18	Aryan
2011	14	Arpita
2014	11	Aarav

Hence, Ankush's age is 27 which is cube of 3.

Q96. Answer: (d) I

1) Z sits at one of the extreme end and faces the person who is an immediate neighbour of M.

2) E sits to the left of Z that means Z sits to the extreme right end of row 2.

3) Only two person sits between B and I.

4) M is the only neighbour of K, who sits diagonally opposite to X that means K sits immediate left of M which is the left end of row 1 so X sits on left end of row 2. So, case – 3 is eliminated.

5) I sits to the right of B.

6) Y sits to the right of B.

7) As many person sits between R and O as many between Y and M.

8) E sits second to the right of the person who faces who faces I.

9) The person who sits opposite to O is immediate neighbour of both H and A.

10) As many person sits between X and H as many between H and Z.

11) U doesn't faces O. In case 1 if we place O to immediate left of I we cannot place H and A as immediate neighbour of the person who is opposite to O. In case 2 we cannot place O at both places because E sits second to the right of the person who faces I which contradicts with the condition of O. So, case2 is eliminated.

Hence, the final arrangement is as follows

Hence, correct answer is option 4.

Q97. Answer: (e) All of these.

1) Z sits at one of the extreme end and faces the person who is an immediate neighbour of M.

2) E sits to the left of Z that means Z sits to the extreme right end of row 2.

3) Only two person sits between B and I.

4) M is the only neighbour of K, who sits diagonally opposite to X that means K sits immediate left of M which is the left end of row 1 so X sits on left end of row 2. So, case – 3 is eliminated.

5) I sits to the right of B.

6) Y sits to the right of B.

7) As many person sits between R and O as many between Y and M.

8) E sits second to the right of the person who faces who faces I.

9) The person who sits opposite to O is immediate neighbour of both H and A.

10) As many person sits between X and H as many between H and Z.

11) U doesn't faces O. In case 1 if we place O to immediate left of I we cannot place H and A as immediate neighbour of the person who is opposite to O. In case 2 we cannot place O at both places because E sits second to the right of the person who faces I which contradicts with the condition of O. So, case2 is eliminated.

Hence, the final arrangement is as follows

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Hence, all statements are correct so correct answer is option 5.

Q98. Answer: (e) F

1) Z sits at one of the extreme end and faces the person who is an immediate neighbour of M.

2) E sits to the left of Z that means Z sits to the extreme right end of row 2.

3) Only two person sits between B and I.

4) M is the only neighbour of K, who sits diagonally opposite to X that means K sits immediate left of M which is the left end of row 1 so X sits on left end of row 2. So, case – 3 is eliminated.

5) I sits to the right of B.

6) Y sits to the right of B.

7) As many person sits between R and O as many between Y and M.

8) E sits second to the right of the person who faces who faces I.

9) The person who sits opposite to O is immediate neighbour of both H and A.

10) As many person sits between X and H as many between H and Z.

11) U doesn't faces O. In case 1 if we place O to immediate left of I we cannot place H and A as immediate neighbour of the person who is opposite to O. In case 2 we cannot place O at both places because E sits second to the right of the person who faces I which contradicts with the condition of O. So, case2 is eliminated.

Hence, the final arrangement is as follows

All are sitting on extreme end of row except F.

Hence, correct answer is option 5.

Q99. Answer: (b) O

1) Z sits at one of the extreme end and faces the person who is an immediate neighbour of M.

2) E sits to the left of Z that means Z sits to the extreme right end of row 2.

3) Only two person sits between B and I.

4) M is the only neighbour of K, who sits diagonally opposite to X that means K sits immediate left of M which is the left end of row 1 so X sits on left end of row 2. So, case – 3 is eliminated.

5) I sits to the right of B.

6) Y sits to the right of B.

7) As many person sits between R and O as many between Y and M.

8) E sits second to the right of the person who faces who faces I.

9) The person who sits opposite to O is immediate neighbour of both H and A.

10) As many person sits between X and H as many between H and Z.

11) U doesn't faces O. In case 1 if we place O to immediate left of I we cannot place H and A as immediate neighbour of the person who is opposite to O. In case 2 we cannot place O at both places because E sits second to the right of the person who faces I which contradicts with the condition of O. So, case2 is eliminated.

Hence, the final arrangement is as follows

Hence, correct answer is option 2.

Q100. Answer: (c) H

1) Z sits at one of the extreme end and faces the person who is an immediate neighbour of M.

2) E sits to the left of Z that means Z sits to the extreme right end of row 2.

3) Only two person sits between B and I.

4) M is the only neighbour of K, who sits diagonally opposite to X that means K sits immediate left of M which is the left end of row 1 so X sits on left end of row 2. So, case – 3 is eliminated.

5) I sits to the right of B.

6) Y sits to the right of B.

7) As many person sits between R and O as many between Y and M.

8) E sits second to the right of the person who faces who faces I.

9) The person who sits opposite to O is immediate neighbour of both H and A.

10) As many person sits between X and H as many between H and Z.

11) U doesn't faces O. In case 1 if we place O to immediate left of I we cannot place H and A as immediate neighbour of the person who is opposite to O. In case 2 we cannot place O at both places because E sits second to the right of the person who faces I which contradicts with the condition of O. So, case2 is eliminated.

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Hence, the final arrangement is as follows

Hence, correct answer is option 3.

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