

IBPS PO Prelims Previous Year Paper 2023

Directions (1-8): Read the given passage and answer the following questions based on it.

Emissions of carbon dioxide and other greenhouse gases plunged 4.6 percent in 2020, as lockdowns in the first half of the year restricted global mobility and hampered economic activity. Many hoped that this would mark the beginning of a more permanent shift downwards in emissions.

Emissions from the manufacturing and the energy sectors contributed the most to recent global increases based on updated information from the IMF's Climate Change Indicators Dashboard—a joint effort among national and international statistical organizations to provide timely data to help monitor the transition to lower carbon use.

As greenhouse gas emissions from human activities increase, they **build** up in the atmosphere and warm the climate, leading to many other changes around the world—in the atmosphere, on land, and in the oceans. While total emissions have climbed significantly above pre-pandemic levels, increases from transportation and households were more muted last year as the pandemic weighed on global mobility. This was particularly evident with the emergence of the omicron variant in the fourth quarter of last year. The public health policy measures in many countries drove down the emissions of households and of the electricity sector.

It will be important to monitor the emissions of both of these sectors as economies fully reopen in the context of historically high fossil fuel-based energy prices. The Intergovernmental Panel on Climate Change has said that, in the scenarios they assessed, limiting atmospheric warming to the key level of around 1.5 degrees Celsius requires global greenhouse gas emissions to peak by 2025 at the latest, emphasizing that achieving this milestone is a crucial step towards controlling the severity of

climate change. The new data from the climate dashboard underscore what some scientists have warned: time is running out, and we must urgently bend the emissions **curve** to achieve the necessary reductions to limit atmospheric warming.

Q1. According to the passage, why did greenhouse gas emissions decrease in 2020?

- (a) Reduced emissions from manufacturing and energy sectors
- (b) The introduction of global policy over capping greenhouse gas emission by 30%
- (c) Global mobility restrictions and economic activity declination due to lockdown
- (d) Increased use of renewable energy sources
- (e) The emergence of the Climate Change Indicators Dashboard

Q2. How do greenhouse gas emissions impact the climate, as mentioned in the passage?

- (a) They lead to increased atmospheric humidity.
- (b) They reduce atmospheric warming.
- (c) They cause changes in the atmosphere, land, and oceans.
- (d) They only affect the atmosphere.
- (e) Their impact on climate is miniscule thus cannot be judged effectively.

Q3. What specific role does the IMF's Climate Change Indicators Dashboard play, as mentioned in the passage?

- (a) Providing funding for renewable energy projects
- (b) Monitoring the transition to lower carbon use
- (c) Assessing the effectiveness of public health measures
- (d) Predicting future global mobility trends
- (e) Advocating for stricter emissions regulations

Q4. What is the significance of limiting atmospheric warming to around 1.5 degrees Celsius, as mentioned by the IPCC?

- (a) It prevents all climate-related changes.
- (b) It ensures immediate reductions in emissions.
- (c) It avoids the need for future climate action.
- (d) It reduces the risk of severe climate impacts.
- (e) It guarantees economic growth.

Q5. What is the overarching message conveyed by the passage regarding greenhouse gas emissions and climate change?

- (a) The world is on track to achieve the necessary reductions in emissions.
- (b) The Climate Change Indicators Dashboard is the sole solution to climate change.
- (c) Greenhouse gas emissions have no significant impact on climate.
- (d) Economic growth is more important than addressing climate change.
- (e) Urgent action is needed to reduce emissions and limit atmospheric warming.

Q6. What does the passage suggest about the relationship between the pandemic and greenhouse gas emissions?

- (a) The pandemic had no impact on greenhouse gas emissions.
- (b) The pandemic led to an increase in emissions.
- (c) The pandemic caused a temporary decrease in emissions.
- (d) The pandemic gave a significant time to construct proper plan to curb greenhouse gas emission
- (e) The pandemic accelerated emissions from the manufacturing sector.

Q7. Which of the following words is the synonym of “curve” as highlighted in the given passage?

- (a) loop
- (b) pendulous
- (c) spiral
- (d) trajectory
- (e) abaft

Q8. Which of the following words is the antonym of “build” as highlighted in the given passage?

- (a) demolish
- (b) rejig
- (c) extraction
- (d) malign
- (e) squeeze

Directions (9-13): Read each sentence to find out whether there is any grammatical or idiomatic error in it. The error, if any, will be in one part of the sentence. The letter of that part is the answer. If there is ‘No error’, the answer is (e). (Ignore errors of punctuation, if any).

Q9. A nimiety of food were (A)/ spread over the tables and was (B)/ way more than any one (C)/ group of people could eat (D)/.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No Error

Q10. The skipper of the (A)/ boat guide the vessel (B)/ through the storm and made (C)/ it safely into the port (D)/.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No Error

Q11. Spunky and full of spirit (A)/, the little girl is known (B)/ for always doing things that (C)/ others are afraid to does (D)/.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No Error

Q12. The cell's nucleus is like (A)/ the conductor of a huge (B)/ opera who tell all the (C)/ performers what to do (D)/.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No Error

Q13. To avoid a calamity, the (A)/ police is asking everyone (B)/ to move away from (C)/ the burning building (D)/.

- (a) A
- (b) B
- (c) C
- (d) D
- (e) No Error

Directions (14-16): In each of the questions given below five words are given in bold. These four words may or may not be in their correct position. The sentence is then followed by options with the correct combination of words that should replace each other in order to make the sentence grammatically and contextually correct. Find the correct combination of the words that replace each other. If the sentence is correct as it is then select option (e) as your choice.

Q14. A **rugged** (A) ceiling fan uses the time-tested **induction** (B) motor, which is **typical** (C) but may have **limits** (D) on **energy** (E) performance.

- (a) E-C
- (b) E-D
- (c) B-D
- (d) A-C
- (e) No interchange required

Q15. In behavioural economics, **choices** (A) are **interventions** (B) that influence people's choices to make certain **decisions** (C) without **restricting** (D) the **nudges** (E) available to them.

- (a) D-A
- (b) E-C
- (c) B-D
- (d) E-A
- (e) No interchange required

Q16. Single-use plastics have **emerged** (A) as one of the world's most **buried** (B) environmental **threats** (C), with vast amounts of waste **pressing** (D) in landfills or **dumped** (E) untreated in rivers and oceans.

- (a) C-E
- (b) A-B
- (c) B-D
- (d) D-A
- (e) No interchange required

Directions (17-21): Rearrange the following sentences in the proper sequence to form a meaningful paragraph; then answer the questions given below them.

- (A) Artificial intelligence and robotics are very recent technologies and risks for our world.
- (B) They may also inherit the full nature of creatures.
- (C) When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations.
- (D) However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk.
- (E) They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions.
- (F) Thus, finally they will create their new universe or the destiny of our universe will be in danger.

Q17. Which of the following should be the THIRD sentence after rearrangement?

- (a) D
- (b) A
- (c) B
- (d) E
- (e) C

Q18. Which of the following should be the FIRST sentence after rearrangement?

- (a) A
- (b) F
- (c) E
- (d) B
- (e) C

Q19. Which of the following should be the FIFTH sentence after rearrangement?

- (a) C
- (b) E
- (c) B
- (d) A
- (e) F

Q20. Which of the following should be the SECOND sentence after rearrangement?

- (a) B
- (b) E
- (c) D
- (d) C
- (e) A

Q21. Which of the following should be the LAST sentence after rearrangement?

- (a) C
- (b) B
- (c) E
- (d) D
- (e) F

Directions (22-25): In each of the following questions, a sentence has been given with two blanks. For each question, five options are given, each containing two words. You have to choose the most suitable option that fits both the blanks grammatically and contextually.

Q22. Although Epsom and Ewell are _____ populated, more than two-fifths of the borough is _____ as a green belt.

- (a) courageously, alarmed
- (b) densely, designated
- (c) brightly, terrified
- (d) morosely, spirited
- (e) sunnily, collected

Q23. The particularly _____ focus on the idea of a fully developed form in Aristotle's _____ of humans derives from its dual role.

- (a) elegant, ambitions
- (b) dapper, operations
- (c) prominent, discussions
- (d) spruce, applications
- (e) formal, attractions

Q24. In summer, the region is bathed in an _____ of sunlight, with a "midnight sun" that _____ sets.

- (a) abundance, never
- (b) absence, there
- (c) violence, now
- (d) silence, below
- (e) vengeance, soon

Q25. This has _____ both local populations and the rest of the world, with rising sea levels and _____ weather events.

- (a) inspired, arcane
- (b) captivated, average
- (c) amazed, abstruse
- (d) depressed, supreme
- (e) affected, extreme

Directions (26): A word has been given in each question and has been used in the sentences given below. Identify the statements where the word has been used in a contextually and grammatically correct manner. If the word has been used correctly in all the three statements, then mark (e), "All of these", as your answer.

Q26. INTEREST

- (i) She developed a keen **interest** in painting during her college years and has since become a talented artist.
 - (ii) The company's new product generated a lot of **interest** among consumers due to its innovative features.
 - (iii) Sarah's **interest** in environmental conservation led her to volunteer at a local wildlife sanctuary.
- (a) both (ii) & (iii)
 - (b) only (i)
 - (c) both (i) & (ii)
 - (d) only (iii)
 - (e) All of these

Directions (27-30): Which of the following phrases given below each sentence should replace the phrase printed in bold letters to make the sentence grammatically correct? Choose the best option among the five given alternatives that reflect the correct use of phrase in the context of the grammatically correct sentence. If the sentence is correct as it is, mark (e) i.e., "No correction required" as the answer.

Q27. Demand for electronics **is growing of all price segments**, even as the production of these devices entails the use of scarce elements and high emissions.

- (a) is grown over all price segment
- (b) is growing across all price segment
- (c) is growing for all price segments
- (d) is growing across all price segments
- (e) No correction required

Q28. The coup-plotters **may have sensed they would get support** from the anti-Erdogan masses and the secular political class.

- (a) may has sensed they would get support
- (b) may have sensed they would get supported
- (c) may has sensed they would get supported
- (d) may have sensed they could get supporting
- (e) No correction required

Q29. Although the Constitution doesn't provide for a fixed number of sessions or days of sitting, three **sessions are typical held in each** calendar year.

- (a) session are typically held in each
- (b) sessions are typically held in each
- (c) sessions are typically hold in each
- (d) sessions is typically held in each
- (e) No correction required

Q30. The ceiling fan market **are undergoing a churn too, driven by** policy imperatives and a regulation change.

- (a) is undergoing a churn too, driven for
- (b) is undergoing a churn to, driven by
- (c) is undergoing a churn too, driven by
- (d) is undergone a churn too, driven by
- (e) No correction required

Direction (31 – 36): What will come in the place of question (?) mark in the following number series.

Q31. 20, 32, 47, 57, 74, ?

- (a) 100
- (b) 96
- (c) 90
- (d) 84
- (e) 80

Q32. 32, 40, 53, 76, ?, 172

- (a) 116
- (b) 112
- (c) 114
- (d) 124
- (e) 120

Q33. 40, 66, 116, 198, 320, ?

- (a) 470
- (b) 490
- (c) 510
- (d) 480
- (e) 520

Q34. 80, ?, 117, 168, 271, 478

- (a) 84
- (b) 104
- (c) 96
- (d) 92
- (e) 90

Q35. ?, 161, 228, 299, 372, 451

- (a) 100
- (b) 110
- (c) 90
- (d) 120
- (e) 80

Q36. 500, 50, 10, 3, 1.2, ?

- (a) 0.9
- (b) 0.32
- (c) 0.6
- (d) 0.4
- (e) 0.5

Q37. A shopkeeper marked up the price of article P by 20% and give discount of d%, then he gets a loss of (d – 11) %. If cost price of article Q is Rs.200 and gets a profit of 1.5d%, then find the selling price of the article Q.

- (a) Rs.335
- (b) Rs.305
- (c) Rs.300
- (d) Rs.345
- (e) Rs.330

Q38. A invested a sum of Rs.20000.1 for 2 years and 10 days at the rate of 11% p.a. at compound interest. The amount he receives after two years again invested for same time at same interest rate in simple interest. Find the approximate simple interest he received.

- (a) Rs.5421
- (b) Rs.5309
- (c) Rs.5390
- (d) Rs.5445
- (e) Rs.5530

Q39. In a container contains mixture of milk to water in the ratio of 3:2. When 75% of the mixture is taken out and 40 liters of mixture of milk and water added in which 40% is milk, then in the resultant mixture milk becomes $44\frac{4}{9}\%$ of total mixture. Find the quantity of milk in initial mixture.

- (a) $\frac{196}{7}$ liters
- (b) None of these
- (c) $\frac{160}{7}$ liters
- (d) $\frac{192}{7}$ liters
- (e) $\frac{320}{7}$ liters

Q40. A, B and C together can complete $66\frac{2}{3}\%$ of work in 2 days and A & B together can complete 30% of the work in 3 days. Find the time taken by C alone to complete $4\frac{2}{3}$ of total work.

- (a) 20 days
- (b) 15 days
- (c) 7.5 days
- (d) 5 days
- (e) 12 days

Directions (41-45): In each of these questions, two equation (I) and (II) are given. You have to solve both the equations and give answer.

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q41. I. $4x^2 + 20x + 25 = 0$

II. $2y^2 + 11y + 15 = 0$

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q42. I. $3x^2 - 14x + 15 = 0$

II. $6y^2 - 31y + 18 = 0$

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q43. I. $4x^2 - 16x + 16 = 0$

II. $10y^2 - 29y + 21 = 0$

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q44. I. $3x^2 - 37x + 114 = 0$

II. $3y^2 - 46y + 171 = 0$

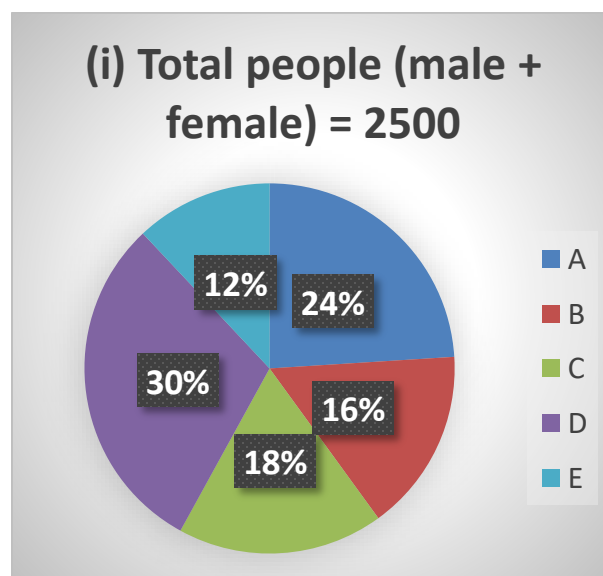
- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Q45. I. $2x^2 + 13x - 150 = 0$

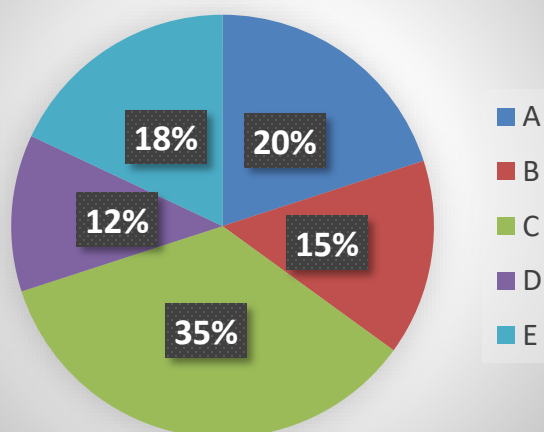
II. $y^2 - 17y + 66 = 0$

- (a) If $x > y$
- (b) If $x \geq y$
- (c) If $x < y$
- (d) If $x \leq y$
- (e) If $x = y$ or no relation can be established between x and y

Direction (46 - 51): The pie chart (i) given below shows percentage distribution of total people (male + female) visited five different clubs and pie chart (ii) shows percentage distribution of total male visited in these five clubs. Read the data carefully and answer the questions given below.



(ii) Total male = 1200



Q46. Total females visited club B and C together are what percent of total people visited club D.

- (a) 40%
- (b) 35%
- (c) 36.3%
- (d) 33.33%
- (e) 30%

Q47. If total females visited club F are 25% more than total female visited club E and total number of people visited club F are $\frac{11}{8}$ th of the total number of males visited club D, then find the ratio of total males visited club F to total male visited club E.

- (a) 29 : 72
- (b) 31 : 72
- (c) 37 : 72
- (d) 23 : 72
- (e) 25 : 72

Q48. The average number of females visited clubs B, E and X is 126. If total males visited club X are 45% of total males visited club A, then find the difference between total number of people visited club X and total females visited clubs A and C together.

- (a) 198
- (b) 218
- (c) 208
- (d) 168
- (e) 178

Q49. If price of each visit pass for club A, B and E is Rs 150, Rs 200 & Rs. 250 respectively, then find the total revenue (in Rs) generated in these clubs by all the males visited.

- (a) 108000
- (b) 136000
- (c) 126000
- (d) 96000
- (e) 156000

Q50. Total Females visited clubs D and E together are approximately what percent more than total females visited clubs A and B together.

- (a) 33%
- (b) 48%
- (c) 45%
- (d) 41%
- (e) 19%

Q51. The ratio of males whose age above 25 years to below 25 years in club C is 5 : 3, while the ratio of females whose age above 25 years to below 25 years in B is 1 : 2. If total males in C and females in B whose age is 25 years are 20 and 40 respectively, then find the sum of total males in C and females in B whose age below 25 years.

- (a) 300
- (b) 320
- (c) 270
- (d) 250
- (e) 210

Direction (52 - 57): Read the information and answer the following questions.

The table shows the number of males working in private and public companies and number of females working in private and public company in four (A, B, C & D) different cities.

Cities	Males in Private company	Males in Public company	Females (private + public)
A	$15x - 2y$	y	55
B	16x	16	108
C	9y	24	74
D	84	21	85

Note - (i) Number of male employees in A are 50.

(ii) Total males working in private company from B and C are 154.

(iii) Total employees (male + female) working in any city = private companies + public company

(iv) Males/females working in any city = Sum of males/females working in private and public company

Q52. In city A, 40% of the females working in private company, then find the ratio females working in public companies from A to total males working in city D.

- (a) 11:35
- (b) 35:11
- (c) 13:11
- (d) 11:13
- (e) none of these.

Q53. The ratio of males working public company from C and females working in private company from city B is 4:5. The females working in public company from B is what percentage of males in public company in city A.

- (a) 780%
- (b) 80%
- (c) 180%
- (d) 760%
- (e) 708%

Q54. Average number of male employees in C and F is 200. 80% out of the total employees (private and public) from city F are females. Find the total employees in F is what percentage less/more than 100y.

- (a) 360
- (b) 400
- (c) 410
- (d) 430
- (e) 420

Q55. 50% of the total females are working private company from all the cities. Find the total employees (male + females) working in public company from all the cities.

- (a) 297
- (b) 250
- (c) 255

(d) 232

(e) 231

Q56. In which of the following cities, males working in private company is less than the average number of males working in private company.

- (a) City C
- (b) City B
- (c) City A
- (d) City A and City B
- (e) City B and City C

Q57. Males working in city C is approximately what percentage of females working from B?

- (a) 80%
- (b) 190%
- (c) 180%
- (d) 106%
- (e) 70%

Q58. When 4 added into the numerator and 10 is subtract from the denominator of a fraction, then the fraction changed from $\frac{8}{11}$ to $\frac{3}{4}$. Now we subtract 4 and 10 from numerator and denominator of the fraction respectively, then find the new fraction.

- (a) $\frac{178}{244}$
- (b) $\frac{184}{243}$
- (c) $\frac{126}{254}$
- (d) $\frac{168}{254}$
- (e) $\frac{208}{254}$

Q59. The ratio of time taken by a boat to cover a distance in downstream to that of in upstream is 3 : 5. If the boat covers 90 km in downstream in t hours and 72 km in upstream in $(t+1)$ hours, then find downstream speed (in km/hr) of the boat.

- (a) 20
- (b) 36
- (c) 24
- (d) 30
- (e) 18

Q60. 240 meters long train crosses a pole in x seconds, while the train can cross a 360 meters long platform in $x+9$ seconds. Find the time taken by the train to cross a dog who is running in the direction of the train at speed of 36 km/hr.

- (a) x seconds
- (b) $2x$ seconds
- (c) $x+2$ seconds
- (d) $x-1$ seconds
- (e) $x+3$ seconds

Q61. The ratio of difference between area of a rectangle obtained in two cases, first when length of a rectangle is decreased by 4 cm and second when breadth of the original rectangle is increased by 4 cm to the area of rectangle is 4 : 9. Find ratio of numerical value perimeter to area of rectangle.

- (a) 2 : 7
- (b) 2 : 5
- (c) 2 : 11
- (d) 2 : 9
- (e) None of these

Q62. A and B started a business with investments of Rs. $5X$ & and Rs. $5X-400$ respectively. After six months, B added Rs. 200 and at the end of the year profit received by B is Rs. 510 out of a total profit of Rs. 1110. Find the value of X .

- (a) 300
- (b) 600
- (c) 500
- (d) 200
- (e) 400

Q63. A spends 20% of his monthly salary on house rent and 25% of the remaining monthly salary on travelling. He spends his remaining monthly salary on food and children's education in the ratio of 3:5 respectively. If the difference between the amount spent on children's education and house rent is Rs. 700, then find the monthly salary of A (in Rs).

- (a) 2500
- (b) 4000
- (c) 4500
- (d) 5000
- (e) 2000

Q64. A man age is $(3p+2q)$ years and his only son's age is ' p ' years while his only daughter's age is ' q ' years. Man's son is three years elder than her sister. If man's wife is five years younger than her husband who is 34 years old, then find average age of the family (in years).

- (a) 14.5
- (b) 19.0
- (c) 16.5
- (d) 22.5
- (e) 20.5

Q65. A vessel contains 79.99 liters mixture of milk and water in which milk is 50% more than water. 20.03 liters of mixture is taken out and 59.99 liters mixture of milk and water mixed in the remaining mixture into the vessel. If in the resultant mixture the milk becomes two times of the water, then find approximate quantity (in liters) of water added.

- (a) 32
- (b) 44
- (c) 16
- (d) 30
- (e) 28

Directions (66-70): Study the following information carefully to answer the given questions:

Eight persons- A, B, C, D, E, F, G, and H sit around a square table such that four Persons face inside and sit middle of the table. Four faces outside and sit corner of the table.

G sits second left of C. Three person sits between D and B. H sits opposite A but does not sit at the middle of the table. D sits 2nd left of A. F sits second to the right of C. E sits immediate right of B.

Q66. Four of the following five are alike in a certain way and thus form a group. Which among the following does not belong to the group?

- (a) F
- (b) E
- (c) A
- (d) G
- (e) C

Q67. How many persons sit between G and F?

- (a) Five
- (b) Three
- (c) One
- (d) Two
- (e) None of these

Q68. Who sits sixth to the left of B?

- (a) D
- (b) A
- (c) G
- (d) H
- (e) None of these

Q69. Who sits immediate right of D?

- (a) G
- (b) C
- (c) F
- (d) A
- (e) None of these

Q70. Who sits second to the left of H?

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

Directions (71-73): In each of the questions below, some statements are given followed by some conclusions. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Q71. Statements: All Gate are Park
Only a few Park are Road
All Road are Subway

Conclusions: I. No Gate is Subway

II. Some Park are not Road

- (a) If only I follow
- (b) If only II follow
- (c) If neither I nor II follows
- (d) If either I or II follows
- (e) If both I and II follow

Q72. Statements: No Soap is Pen

Only a few Soap is Eraser

Only a few Eraser is Clip

Conclusions: I. Some Eraser are Pen

II. Some Clip is not Soap

- (a) If only I follow
- (b) If only II follow
- (c) If neither I nor II follows
- (d) If either I or II follows
- (e) If both I and II follow

Q73. Statements: Some Giraffe is Kangaroo

All Turtle is Giraffe

All Seal is Kangaroo

Conclusions: I. Some Turtle is Kangaroo

II. All Giraffe can be Seal

- (a) If only I follows
- (b) If only II follows
- (c) If neither I nor II follows
- (d) If either I or II follows
- (e) If both I and II follow

Directions (74): Study the following information carefully to answer the given questions:

In the certain code language:

“All the time” is coded as “2 1 4”

“The way home” is coded as “7 8 2”

“Home is far” is coded as “3 5 8”

Q74. What is the code of the word “Way”?

- (a) 7
- (b) 8
- (c) 2
- (d) 3
- (e) None of these

Q75. If it is possible to make only one meaningful word from the 4th, 5th, 8th and 10th letters of the word "INTERCHANGE" using each letter only once, then what is the last letter of the word. If no such meaningful word can be formed the answer is "X" and if more than one such meaningful word can be formed, the answer will be "Z"?

- (a) E
- (b) X
- (c) A
- (d) R
- (e) Z

Directions (76-80): Study the following arrangement carefully and answer the questions given below:

Five boxes A, B, C, D and E are kept one above the other in a stack but not necessarily in the same order. Each box contains different fruits i.e., Orange, Mango, Apple, Banana, and Guava but not necessarily in the same order.

One box gap between box E and the box which contains Mango. Two boxes gap between the box which contains Orange and Banana. Apple box placed immediate below Banana box. Two boxes gap between box E and box B which contains Banana. Box A is placed immediately above box C.

Q76. Which of the following box is placed immediately below Box E?

- (a) Box A
- (b) Box B
- (c) Box D
- (d) Box C
- (e) None of these

Q77. How many boxes are placed between Box E and Box D?

- (a) One
- (b) Two
- (c) None
- (d) Three
- (e) None of these

Q78. Which of the following box contains Guava?

- (a) Box B
- (b) Box A
- (c) Box D
- (d) Box C
- (e) Box E

Q79. How many boxes are placed between Guava and Apple boxes?

- (a) Three
- (b) Four
- (c) One
- (d) Two
- (e) None of these

Q80. Which of the following box contains Apple?

- (a) Box D
- (b) Box A
- (c) Box B
- (d) Box C
- (e) Box E

Directions (81-83): Study the following information carefully and answer the questions given below:

Point A is 11m to the west of Point B. Point C is 8m to the south of Point B. Point C is 1m to the west of Point J. Point J is 12m to the south of Point H. Point D is 11m to the east of Point J. Point E is 6m to the south of Point D. Point F is 17m to the west of Point E. Point G is in the north of Point F and to the west of Point H.

Q81. What is the shortest distance between Point G and Point F?

- (a) 17m
- (b) 18m
- (c) 19m
- (d) 21m
- (e) None of these

Q82. What is the direction of Point F with respect to Point D?

- (a) South
- (b) North
- (c) South-west
- (d) North-east
- (e) None of these

Q83. What is the direction of Point G with respect to Point E?

- (a) North
- (b) West
- (c) North-west
- (d) South-west
- (e) None of these

Directions (84-88): Study the following information carefully and answer the questions given below:

Six persons i.e., R, T, P, U, S and Q travel to the different states i.e., Delhi, Sikkim, Odisha, Goa, Kerala and Assam on two different dates i.e., 9th and 26th of three different months viz. May, June and July of the same year but not necessarily in the same order.

One person travel between P and the person who travels to Delhi. The person who travels to Delhi neither travels in month having an even number of days nor on even date. The person who travels to Delhi and the person who travels to Goa is not the first person to travel. Two Person travels between T and U who travels to Goa. T travels after P. The person who travels to Odisha travels just before S. Two persons travel between the person who travels to Kerala and the person who travels to Assam. U does not travel just after the person who travels to Assam. The number of persons travel between Q and S is one more than the number of person travel before R.

Q84. Who travels in the month of June?

- (a) The person who travels to Assam
- (b) Q
- (c) T
- (d) The person who travels to Sikkim
- (e) None of these

Q85. Who among the following person travel on 26th June?

- (a) T
- (b) Q
- (c) R
- (d) S
- (e) None of these

Q86. How many persons travel after the person who travel to Odisha?

- (a) One
- (b) Three
- (c) Two
- (d) Four
- (e) None of these

Q87. Who among the following person travels to Sikkim?

- (a) T
- (b) S
- (c) P
- (d) Q
- (e) None of these

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

- (a) R – Goa
- (b) P -Assam
- (c) S - Assam
- (d) R-Sikkim
- (e) All are true

Q89. How many such pairs of letters are there in the word 'ASPIRING', each of which has as many letters between them in the word as they have in the English alphabet (both in forward and backward directions)?

- (a) Three
- (b) Four
- (c) One
- (d) Two
- (e) None of these

Directions (90-94): Study the following information carefully and answer the questions given below:

Nine persons L, N, O, P, Q, W, Y, V and Z live in three different cities Barcelona, Dehradun and Texas but not necessarily in the same order.

Q lives with V but neither in Texas nor Dehradun. P lives only with Z but not in Texas. W does not live with V. N neither lives with Y nor in Dehradun. O either lives in Dehradun or Texas. N does not live in Texas. Odd numbers of persons live in Barcelona. O lives with L.

Q90. Who among the persons lives with W?

- (a) N
- (b) Q
- (c) Y
- (d) Z
- (e) None of these

Q91. Which city does O live in?

- (a) Barcelona
- (b) Dehradun
- (c) Texas
- (d) Either Texas or Dehradun
- (e) None of the above

Q92. How many persons live in Texas?

- (a) Three
- (b) Five
- (c) Two
- (d) Four
- (e) None of the above

Q93. Who does not live with W?

- (a) O
- (b) Q
- (c) Y
- (d) L
- (e) None of the above

Q94. Which of the following statement is true?

- I. Q and Y live in same city
- II. Y lives with W
- III. More than two persons live in Texas
- (a) Both II and III
- (b) Only I
- (c) Both I and II
- (d) Only III
- (e) Both I and III

Directions (95-97): In this question, the relationship between different elements is shown in the statements. The statements are followed by conclusions. Study the conclusions based on the given statement and select the appropriate answer.

Q95. Statements: $U > I \leq L \leq O$; $R < T \leq Y > E$; $X > Y > O \leq B$

Conclusions: I. $I < X$ II. $R > U$

- (a) If only conclusion I is true
- (b) If only conclusion II is true
- (c) If either conclusion I or II is true
- (d) If neither conclusion I nor II is true
- (e) If both conclusions I and II are true

Q96. Statements: $7 > 5 < 9 \geq 3$; $4 > 5 \geq 0 < 2$; $6 > 8 \leq 4 > 1$

Conclusions: I. $7 > 6$ II. $1 > 2$

- (a) If only conclusion I is true
- (b) If only conclusion II is true
- (c) If either conclusion I or II is true
- (d) If neither conclusion I nor II is true
- (e) If both conclusions I and II are true

Q97. Statements: $M \leq O > T > R > E$; $N = H \leq R > K < U$

Conclusions: I. $E > N$ II. $H \geq E$

- (a) If only conclusion I is true
- (b) If only conclusion II is true
- (c) If either conclusion I or II is true
- (d) If neither conclusion I nor II is true
- (e) If both conclusions I and II are true

Directions (98-100): Study the following information carefully to answer the given questions:

Certain numbers of persons sit in a row face north. Two persons sit between Q and P. P sits 3rd to the

left of L. B sits adjacent to L. Four persons sit between B and Q who sits just right of D. The numbers of persons sit between Q and P is one more than the numbers of persons sit between R and Q. S sits 2nd to the left of R. Two persons sit between S and E. The numbers of persons sit between E and S is same as the numbers of persons sit to the left of E. K sits at one of the extreme ends and two places away from L.

Q98. Who sits at the rightmost end of the row?

- (a) P
- (b) K
- (c) R
- (d) D
- (e) S

Q99. How many persons sit between B and E?

- (a) 11
- (b) 12
- (c) 17
- (d) 14

(e) None of these

Q100. How many persons sit in the row?

- (a) 17
- (b) 19
- (c) 18
- (d) 16
- (e) None of these

Solutions

S1. Ans.(c)

Sol. The correct answer is: **“Global mobility restrictions and economic activity declination due to lockdown”.**

The passage explicitly states that greenhouse gas emissions decreased in 2020 due to lockdowns in the first half of the year, which restricted global mobility and hampered economic activity. For better understanding, refer to the first sentence of the passage, ***“Emissions of carbon dioxide and other greenhouse gases plunged 4.6 percent in 2020, as lockdowns in the first half of the year restricted global mobility and hampered economic activity”.***

Information given in other options are incorrect as they do not align with the information presented in the passage.

(a) **Reduced emissions from manufacturing and energy sectors:** This option is not supported by the passage. The passage does mention that emissions from manufacturing and the energy

sectors contributed to recent global increases in greenhouse gas emissions, but it does not indicate that these emissions decreased in 2020.

(b) **The introduction of global policy over capping greenhouse gas emission by 30%:** There is no mention of such a global policy in the passage. Therefore, this option is not supported by the information provided.

(d) **Increased use of renewable energy sources:** There is no mention in the passage that the decrease in emissions in 2020 was primarily due to increased use of renewable energy sources. While renewable energy sources are beneficial for reducing emissions, this specific cause is not mentioned.

(e) **The emergence of the Climate Change Indicators Dashboard:** The Climate Change Indicators Dashboard is mentioned in the passage, but it is not cited as a reason for the decrease in emissions in 2020. Therefore, this option is not supported by the passage.

S2. Ans.(c)

Sol. The correct answer is: **“They cause changes in the atmosphere, land, and oceans”**.

The passage explicitly states that greenhouse gas emissions from human activities lead to many changes around the world, including in the atmosphere, on land, and in the oceans. For better understanding, refer to the first sentence of the second paragraph, ***“As greenhouse gas emissions from human activities increase, they build up in the atmosphere and warm the climate, leading to many other changes around the world—in the atmosphere, on land, and in the oceans.”***

Information given in other options are incorrect as they do not align with the information presented in the passage.

(a) **They lead to increased atmospheric humidity:** The passage does not mention anything about greenhouse gas emissions leading to increased atmospheric humidity. Therefore, this option is not supported by the passage.

(b) **They reduce atmospheric warming:** This option is not supported by the passage either. Greenhouse gas emissions, as mentioned in the passage, lead to atmospheric warming and contribute to global climate change. They do not reduce atmospheric warming.

(d) **They only affect the atmosphere:** This option is contradicted by the information in the passage. The passage makes it clear that greenhouse gas emissions have widespread impacts, not limited to the atmosphere alone.

(e) **Their impact on climate is minuscule and cannot be judged effectively:** The passage does not suggest that the impact of greenhouse gas emissions on climate is minuscule or impossible to judge. In fact, the passage emphasizes the importance of reducing emissions to limit atmospheric warming, indicating that their impact is significant.

S3. Ans.(b)

Sol. The correct answer is: **“Monitoring the transition to lower carbon use”**.

The passage mentions that the IMF's Climate Change Indicators Dashboard is a joint effort among national and international statistical organizations to provide timely data to help monitor the transition to lower carbon use. It plays a role in monitoring progress toward reducing carbon emissions. For better understanding, refer to the last statement of the first paragraph, ***“Emissions from the manufacturing and the energy sectors contributed the most to recent global increases based on updated information from the IMF's Climate Change Indicators Dashboard—a joint effort among national and international statistical organizations to provide timely data to help monitor the transition to lower carbon use.”***

The other options are not mentioned in the passage as the purpose of IMF's Climate Change Indicators Dashboard, thus cannot be taken as the answer choice.

(a) **Providing funding for renewable energy projects:** This is not mentioned in the passage. The role of the IMF's Climate Change Indicators Dashboard is about monitoring and providing data, not funding projects.

(c) **Assessing the effectiveness of public health measures:** While public health measures are mentioned in the passage, there is no indication that the IMF's Dashboard is responsible for assessing their effectiveness. Its primary role is related to carbon emissions.

(d) **Predicting future global mobility trends:** The passage mentions global mobility restrictions due to the pandemic but does not suggest that the IMF's Dashboard predicts future mobility trends. Its focus is on carbon emissions data.

(e) **Advocating for stricter emissions regulations:** The passage does not mention advocacy or lobbying activities by the IMF's Dashboard. Its role is primarily data-driven and monitoring-based, rather than advocating for policies.

S4. Ans.(d)

Sol. The correct answer is: **"It reduces the risk of severe climate impacts"**.

The passage mentions that limiting atmospheric warming to around 1.5 degrees Celsius is significant because it reduces the risk of severe climate impacts. This aligns with the passage's message that time is running out, and urgent action is needed to limit atmospheric warming. For better understanding, refer to the last paragraph where it is mentioned, ***"The Intergovernmental Panel on Climate Change has said that, in the scenarios they assessed, limiting atmospheric warming to the key level of around 1.5 degrees Celsius requires global greenhouse gas emissions to peak by 2025 at the latest, emphasizing that achieving this milestone is a crucial step towards controlling the severity of climate change."***

Information given in other options are incorrect as they do not align with the information presented in the passage.

(a) It prevents all climate-related changes:

The passage does not suggest that limiting atmospheric warming to 1.5 degrees Celsius prevents all climate-related changes

(b) It ensures immediate reductions in emissions:

The passage does not mention that limiting atmospheric warming to 1.5 degrees Celsius ensures immediate reductions in emissions. The emphasis is on the need to reduce emissions to achieve this goal, but it does not guarantee immediacy.

(c) It avoids the need for future climate action:

This option is not supported by the passage. The passage does not suggest that limiting warming to 1.5 degrees Celsius eliminates the need for future climate action; it highlights the urgency of bending the emissions curve to achieve this goal.

(e) It guarantees economic growth:

The passage does not suggest that limiting warming to 1.5 degrees Celsius guarantees economic growth. It focuses on the environmental and climate-related aspects of the issue rather than economic growth.

S5. Ans.(e)

Sol. The correct answer is: **"Urgent action is needed to reduce emissions and limit atmospheric warming"**.

The passage's overarching message is that urgent action is needed to bend the emissions curve and achieve necessary reductions in greenhouse gas emissions to limit atmospheric warming. It underscores the urgency of addressing climate change.

Information given in other options are incorrect as they do not align with the information presented in the passage.

(a) The world is on track to achieve the necessary reductions in emissions:

This option is not supported by the passage. The passage indicates that greenhouse gas emissions have increased above pre-pandemic levels, suggesting that the world is not currently on track to achieve necessary reductions.

(b) The Climate Change Indicators Dashboard is the sole solution to climate change:

The passage mentions about the Climate Change Indicators Dashboard but does not suggest that it is the sole solution to climate change. This option oversimplifies the issue and is not supported by the passage.

(c) Greenhouse gas emissions have no significant impact on climate:

This option is contradicted by the passage. The passage clearly states that greenhouse gas emissions from human activities lead to various changes around the world, affecting the atmosphere, land, and oceans. It acknowledges the significant impact of emissions on the climate.

(d) Economic growth is more important than addressing climate change:

The passage does not convey the message that economic growth is more important than addressing climate change. Instead, it emphasizes the urgent need to reduce emissions to limit atmospheric warming, indicating the importance of addressing climate change.

S6. Ans.(c)

Sol. The correct answer is: **"The pandemic caused a temporary decrease in emissions".**

The passage mentions that greenhouse gas emissions decreased in 2020 due to lockdowns in the first half of the year. This suggests a temporary decrease associated with the pandemic.

Information given in other options are incorrect as they do not align with the information presented in the passage.

(a) The pandemic had no impact on greenhouse gas emissions:

This option is not supported by the passage. The passage clearly states that greenhouse gas emissions decreased in 2020 due to lockdowns, which were a response to the pandemic. Therefore, the pandemic did have an impact on emissions.

(b) The pandemic led to an increase in emissions:

This option is contradicted by the passage. The passage mentions that greenhouse gas emissions plunged in 2020 due to lockdowns, indicating a decrease in emissions during the pandemic.

(d) The pandemic gave a significant time to construct a proper plan to curb greenhouse gas emissions:

The passage does not provide information about the pandemic giving time to construct a proper plan to curb emissions. This option is not supported by the passage.

(e) The pandemic accelerated emissions from the manufacturing sector:

The passage does not mention the pandemic accelerating emissions from the manufacturing sector. This option is not supported by the passage.

S7. Ans.(d)

Sol. The synonym for "curve" as highlighted in the given passage is: **"trajectory".**

A trajectory refers to the path followed by an object moving through space, and in the context of the passage, "curve" likely refers to the trajectory of greenhouse gas emissions.

Incorrect options:

(a) loop: A "loop" typically refers to a shape formed by a curve that bends and curves back on itself, often in a circular or oval manner. While a loop involves curves, it doesn't necessarily capture the idea of a continuous and gradual change in direction, as the word "curve" does in the context of the passage.

(b) pendulous: "Pendulous" describes something hanging loosely and swinging, often in a curved or arc-like motion. While "pendulous" relates to movement and curves, it doesn't directly convey the idea of a curve as a graphical representation or a continuous, smooth change in direction.

(c) spiral: A "spiral" is a shape or pattern characterized by a continuous and gradually expanding curve that winds around a central point or axis. This term does not align with the idea of a curve, especially one that is continuous and evolving.

(e) abaft: "Abaft" is a nautical term that refers to a location on a ship, specifically toward the rear or stern. It does not relate to the concept of a curve or the way "curve" is used in the passage.

S8. Ans.(a)

Sol. The antonym for "build" as highlighted in the given passage is: **"demolish".**

"Demolish" means to destroy or tear down, which is the opposite of "build," which means to construct or create.

Incorrect options:

(b) rejig: "Rejig" is not a direct antonym of "build." It means to reorganize or make changes to something, often without completely destroying it. While it can involve altering existing structures or systems, it does not inherently mean to completely tear down or eliminate as "demolish" does.

(c) **extraction:** "Extraction" refers to the process of removing something, often from its source or environment. It is not a direct antonym of "build" because it does not necessarily involve destroying or tearing down, which is the opposite action implied by "demolish."

(d) **malign:** "Malign" means to speak critically or harmfully about something or someone. It is not directly related to the concept of building or construction, so it is not an antonym of "build."

(e) **squeeze:** "Squeeze" typically refers to applying pressure to compress or reduce the size or volume of something. While it doesn't directly relate to the concept of construction or building, it also does not represent the opposite action of building or constructing.

S9. Ans.(a)

Sol. The error in **Part (A)** is the subject-verb agreement. The word "nimity" is a singular noun, so the verb "were" should be changed to the singular form "was" to match. To make the sentence grammatically correct, the word "were" should be replaced with "**was**".

The other parts of the sentence are grammatically correct.

Therefore, the correct sentence would be: "A nimity of food **was** spread over the tables and was way more than any one group of people could eat."

S10. Ans.(b)

Sol. Part (B) has a grammatical error. The correct form is "guided the vessel" instead of "guide the vessel." The verb should be in the past tense to match the context of the sentence. To make the sentence grammatically correct, the word "guide" should be replaced with "**guided**".

The other parts of the sentence are grammatically correct.

Therefore, the correct sentence would be: "The skipper of the boat **guided** the vessel through the storm and made it safely into the port."

S11. Ans.(d)

Sol. Part (D) has a grammatical error. The correct form is "others are afraid to do" instead of "others are afraid to does." The verb "does" should be in the base form after the preposition "to" to form the infinitive phrase. To make the sentence grammatically correct, the word "does" should be replaced with "**do**".

The other parts of the sentence are grammatically correct.

Therefore, the correct sentence would be: "Spunky and full of spirit, the little girl is known for always doing things that others are afraid to **do**."

S12. Ans.(c)

Sol. Part (C) has a grammatical error. The verb "tell" should be in the singular form "tells" to agree with the singular subject "conductor." To make the sentence grammatically correct, the word "tell" should be replaced with "**tells**".

The other parts of the sentence are grammatically correct.

Therefore, the correct sentence would be: "The cell's nucleus is like the conductor of a huge opera who **tells** all the performers what to do."

S13. Ans.(b)

Sol. Part (B) has a grammatical error. The verb "is" should be changed to "are" to agree with the plural subject "police." To make the sentence grammatically correct, the word "is" should be replaced with "**are**".

The other parts of the sentence are grammatically correct.

Therefore, the correct sentence would be: "To avoid a calamity, the police **are** asking everyone to move away from the burning building."

S14. Ans.(d)

Sol. Among the highlighted words, “rugged” and “typical” are incorrectly placed. The correct combination of words that should replace each other in order to make the sentence grammatically and contextually correct is **A-C**. The word “**rugged**” should be replaced with “**typical**” as the given statement is saying that a typical ceiling fan uses the time-tested induction motor, which is rugged but may have limits on energy performance.

So, the correct sentence after rearrangement of words would be, “A **typical** ceiling fan uses the time-tested **induction** motor, which is **rugged** but may have **limits** on **energy** performance.”

S15. Ans.(d)

Sol. Among the highlighted words, “choices” and “nudges” are incorrectly placed. The correct combination of words that should replace each other in order to make the sentence grammatically and contextually correct is **E-A**. The word “**choices**” should be replaced with “**nudges**” as the given statement is saying that in behavioural economics, nudges are interventions that influence people’s choices to make certain decisions without restricting the choices available to them.

So, the correct sentence after rearrangement of words would be, “In behavioural economics, **nudges** are **interventions** that influence people’s choices to make certain **decisions** without **restricting** the **choices** available to them.”

S16. Ans.(c)

Sol. Among the highlighted words, “buried” and “pressing” are incorrectly placed. The correct combination of words that should replace each other in order to make the sentence grammatically and contextually correct is **B-D**. The word “**buried**” should be replaced with “**pressing**” as the given statement is saying that single-use plastics have emerged as one of the world’s most pressing environmental threats, with vast amounts of waste buried in landfills or dumped untreated in rivers and oceans.

So, the correct sentence after rearrangement of words would be, “Single-use plastics have **emerged** as one of the world’s most **pressing** environmental **threats**, with vast amounts of waste **buried** in landfills or **dumped** untreated in rivers and oceans.”

S17. Ans.(e)

Sol. The correct sequence of the given sentences to form a meaningful paragraph is **AECDBF**. Here’s the explanation for the sequence:

(A) “**Artificial intelligence and robotics are very recent technologies and risks for our world.**” This sentence introduces the topic of artificial intelligence and robotics as recent technologies and potential risks to the world.

(E) “**They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions.**” Sentence E provides information about the rapid development and changing intentions of artificial intelligence and robotics.

(C) “**When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations.**” Sentence C suggests that examining the past histories of AI and robotics can help humans understand their objectives and intentions in various situations.

(D) “**However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on**

the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk." Sentence D introduces the idea that the attitudes of AI inventors and the capacity of AI for adaptation could lead to potential risks, making them "predators" in certain contexts.

(B) "They may also inherit the full nature of creatures." Sentence B follows logically from sentence D, suggesting that AI and robotics might inherit the nature of creatures, further supporting the idea of them becoming potential risks.

(F) "Thus, finally they will create their new universe or the destiny of our universe will be in danger." Sentence F concludes the paragraph by discussing the potential creation of a new universe or the threat to the destiny of our universe as a result of AI and robotics.

Thus, the sequence **AECDBF** provides a logical flow of ideas, starting with the introduction of AI and robotics, their development, examination of their objectives, the potential risks they pose, their inheritance of creature nature, and the possible consequences for the universe.

S18. Ans.(a)

Sol. The correct sequence of the given sentences to form a meaningful paragraph is **AECDBF**. Here's the explanation for the sequence:

(A) "Artificial intelligence and robotics are very recent technologies and risks for our world." This sentence introduces the topic of artificial intelligence and robotics as recent technologies and potential risks to the world.

(E) "They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions." Sentence E provides information about the rapid development and changing intentions of artificial intelligence and robotics.

(C) "When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations." Sentence C suggests that examining the past

histories of AI and robotics can help humans understand their objectives and intentions in various situations.

(D) "However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk." Sentence D introduces the idea that the attitudes of AI inventors and the capacity of AI for adaptation could lead to potential risks, making them "predators" in certain contexts.

(B) "They may also inherit the full nature of creatures." Sentence B follows logically from sentence D, suggesting that AI and robotics might inherit the nature of creatures, further supporting the idea of them becoming potential risks.

(F) "Thus, finally they will create their new universe or the destiny of our universe will be in danger." Sentence F concludes the paragraph by discussing the potential creation of a new universe or the threat to the destiny of our universe as a result of AI and robotics.

Thus, the sequence **AECDBF** provides a logical flow of ideas, starting with the introduction of AI and robotics, their development, examination of their objectives, the potential risks they pose, their inheritance of creature nature, and the possible consequences for the universe.

S19. Ans.(c)

Sol. The correct sequence of the given sentences to form a meaningful paragraph is **AECDBF**. Here's the explanation for the sequence:

(A) "Artificial intelligence and robotics are very recent technologies and risks for our world." This sentence introduces the topic of artificial intelligence and robotics as recent technologies and potential risks to the world.

(E) "They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions."

Sentence E provides information about the rapid development and changing intentions of artificial intelligence and robotics.

(C) "When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations."

Sentence C suggests that examining the past histories of AI and robotics can help humans understand their objectives and intentions in various situations.

(D) "However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk." Sentence D introduces the idea that the attitudes of AI inventors and the capacity of AI for adaptation could lead to potential risks, making them "predators" in certain contexts.

(B) "They may also inherit the full nature of creatures." Sentence B follows logically from sentence D, suggesting that AI and robotics might inherit the nature of creatures, further supporting the idea of them becoming potential risks.

(F) "Thus, finally they will create their new universe or the destiny of our universe will be in danger." Sentence F concludes the paragraph by discussing the potential creation of a new universe or the threat to the destiny of our universe as a result of AI and robotics.

Thus, the sequence **AECDBF** provides a logical flow of ideas, starting with the introduction of AI and robotics, their development, examination of their objectives, the potential risks they pose, their inheritance of creature nature, and the possible consequences for the universe.

S20. Ans.(b)

Sol. The correct sequence of the given sentences to form a meaningful paragraph is **AECDBF**. Here's the explanation for the sequence:

(A) "Artificial intelligence and robotics are very recent technologies and risks for our world." This sentence introduces the topic of artificial intelligence and robotics as recent technologies and potential risks to the world.

(E) "They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions."

Sentence E provides information about the rapid development and changing intentions of artificial intelligence and robotics.

(C) "When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations."

Sentence C suggests that examining the past histories of AI and robotics can help humans understand their objectives and intentions in various situations.

(D) "However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk." Sentence D introduces the idea that the attitudes of AI inventors and the capacity of AI for adaptation could lead to potential risks, making them "predators" in certain contexts.

(B) "They may also inherit the full nature of creatures." Sentence B follows logically from sentence D, suggesting that AI and robotics might inherit the nature of creatures, further supporting the idea of them becoming potential risks.

(F) "Thus, finally they will create their new universe or the destiny of our universe will be in danger." Sentence F concludes the paragraph by discussing the potential creation of a new universe or the threat to the destiny of our universe as a result of AI and robotics.

Thus, the sequence **AECDBF** provides a logical flow of ideas, starting with the introduction of AI and robotics, their development, examination of their objectives, the potential risks they pose, their inheritance of creature nature, and the possible consequences for the universe.

S21. Ans.(e)

Sol. The correct sequence of the given sentences to form a meaningful paragraph is **AECDBF**. Here's the explanation for the sequence:

(A) "Artificial intelligence and robotics are very recent technologies and risks for our world." This sentence introduces the topic of artificial intelligence and robotics as recent technologies and potential risks to the world.

(E) "They are developing their capacity dramatically and shifting their origins of developing intention to other dimensions." Sentence E provides information about the rapid development and changing intentions of artificial intelligence and robotics.

(C) "When humans see the past histories of AI and robotics, human beings can examine and understand the objectives and intentions of them to make life easy and assist human beings within different circumstances and situations." Sentence C suggests that examining the past histories of AI and robotics can help humans understand their objectives and intentions in various situations.

(D) "However, currently and in the near future, due to the change in the attitude of robotic and AI inventors and experts as well as based on the AI nature that their capacity of environmental acquisition and adaptation, they may become predators and put creatures at risk." Sentence D introduces the idea that the attitudes of AI inventors and the capacity of AI for adaptation could lead to potential risks, making them "predators" in certain contexts.

(B) "They may also inherit the full nature of creatures." Sentence B follows logically from sentence D, suggesting that AI and robotics might inherit the nature of creatures, further supporting the idea of them becoming potential risks.

(F) "Thus, finally they will create their new universe or the destiny of our universe will be in danger." Sentence F concludes the paragraph by discussing the potential creation of a new universe or the threat to the destiny of our universe as a result of AI and robotics.

Thus, the sequence **AECDBF** provides a logical flow of ideas, starting with the introduction of AI and robotics, their development, examination of their objectives, the potential risks they pose, their inheritance of creature nature, and the possible consequences for the universe.

S22. Ans.(b)

Sol. The most appropriate words to fill in the given blanks are: **"densely, designated"**.

This option is correct. "Densely" fits the context as it describes the population, and "designated" is the right word to describe the green belt, indicating that it has been officially marked or assigned for a particular purpose.

Thus, the sentence will be "Although Epsom and Ewell are **densely** populated, more than two-fifths of the borough is **designated** as a green belt."

The other options are not correct because they do not make sense in the context of the sentence.

(a) courageously, alarmed- This option is incorrect because "courageously" and "alarmed" don't make sense in the context of the sentence. "Courageously" means to do something with courage, bravery, or fearlessness. "Alarmed" means to be frightened or concerned about a potential danger or threat.

(c) brightly, terrified- This option is incorrect. "Brightly" and "terrified" are not suitable words for this sentence. They don't convey the intended meaning. "Brightly" means with a lot of light or in a cheerful manner. "Terrified" means extremely afraid or scared.

(d) morosely, spirited- This option is incorrect because "morosely" and "spirited" are not appropriate in the context. The sentence is about the population and the designation of a green belt, and these words do not fit. "Morosely" means in a gloomy, sullen, or melancholy manner. "Spirited" means having a lively or energetic quality.

(e) sunnily, collected- This option is incorrect. "Sunnily" and "collected" are not relevant to the context of the sentence. They do not make the sentence meaningful. "Sunnily" means in a cheerful, sunny, or optimistic manner. "Collected" means gathered together or composed, often referring to one's state of mind or demeanor.

S23. Ans.(c)

Sol. The most appropriate words to fill in the given blanks are: **"prominent, discussions"**.

This option is correct. The word "prominent" means well-known or important and the word "discussions" refer to conversations or debates. It fits the context well because it suggests that Aristotle's focus on a fully developed form is a notable or important aspect of his discussions about humans.

Thus, the sentence will be "The particularly **prominent** focus on the idea of a fully developed form in Aristotle's **discussions** of humans derives from its dual role."

The other options are not correct because they do not make sense in the context of the sentence.

(a) elegant, ambitions- This option is incorrect because "elegant" and "ambitions" do not logically fit the context of the sentence. The sentence is discussing Aristotle's philosophical ideas, and these words do not provide a meaningful connection. The word "elegant" means refined or tasteful in appearance or style and the word "ambitions" refer to one's goals or aspirations.

(b) dapper, operations- This option is incorrect because "dapper" and "operations" do not make sense in the context of discussing Aristotle's philosophical ideas about humans. The word "dapper" means neatly dressed or stylish in appearance and the word "operations" typically refer to processes or activities.

(d) spruce, applications- This option is incorrect because "spruce" and "applications" do not convey the intended meaning in the context of Aristotle's philosophical ideas. The word "spruce" means neat, smart, or tidy in appearance and the word "applications" typically refer to the practical use of something.

(e) formal, attractions- This option is incorrect because "formal" and "attractions" do not provide a logical connection to the context of Aristotle's philosophical discussions about humans. The word "formal" means following established procedures or conventions and the word "attractions" refer to things that are interesting or appealing.

S24. Ans.(a)

Sol. The most appropriate words to fill in the given blanks are: **"abundance, never"**.

This option appropriately describes the region being bathed in a large quantity of sunlight during summer, with the "midnight sun" never setting. The word "abundance" means a large quantity or plenty of something. In the context of summer and sunlight, this word fits perfectly as it conveys the idea of there being a lot of sunlight. The word "never" is the appropriate word to indicate that the "midnight sun" does not set during the summer.

Thus, the sentence will be "In summer, the region is bathed in an **abundance** of sunlight, with a "midnight sun" that **never** sets."

The other options are not correct because they do not make sense in the context of the sentence.

(b) absence, there- "Absence" means the state of being away or not present. This word does not fit the context because the sentence is describing the region being bathed in sunlight, not its absence. "There" is not suitable in this context as it doesn't convey the intended meaning. The sentence is describing the continuous presence of sunlight.

(c) violence, now- "Violence" refers to physical force causing injury or damage. This word does not make sense in the context of sunlight and the "midnight sun." "Now" does not convey the appropriate meaning in this context.

(d) silence, below- "Silence" means the absence of sound. This word is not relevant to describing sunlight. "Below" does not fit the context of describing sunlight and the "midnight sun."

(e) vengeance, soon- "Vengeance" means the desire for revenge or retaliation, which is not related to sunlight. "Soon" does not convey the intended meaning. The sentence is describing the continuous presence of sunlight during summer, not that it will happen soon.

S25. Ans.(e)

Sol. The most appropriate words to fill in the given blanks are: **"affected, extreme"**.

This option accurately conveys the meaning of the sentence, highlighting the impact and extreme nature of the events. The word "affected" is the correct word as it describes the impact or influence of an event on both local populations and the rest of the world. The word "extreme" correctly describes the nature of the weather events, emphasizing their severity and intensity, which is appropriate in the context.

Thus, the sentence will be "This has **affected** both local populations and the rest of the world, with rising sea levels and **extreme** weather events."

The other options are not correct because they do not make sense in the context of the sentence.

(a) inspired, arcane- "Inspired" means to be motivated or influenced by something, but it doesn't fit the context of the sentence, which is discussing the impact of an event. "Arcane" means understood by few, mysterious, or obscure. This word is not appropriate in the context of rising sea levels and weather events.

(b) captivated, average- "Captivated" means to be charmed or enthralled by something, but it doesn't convey the intended meaning of the sentence, which is about the impact of an event. "Average" is not relevant in the context of describing the effects of an event on local populations and the world.

(c) amazed, abstruse- "Amazed" means to be surprised or astonished, but it doesn't appropriately describe the effects of an event. "Abstruse" means difficult to understand or comprehend, and it doesn't fit the context of the sentence.

(d) depressed, supreme- "Depressed" means feeling sad or downcast, and it doesn't convey the intended meaning of the sentence, which is about the impact of an event. "Supreme" means the highest in rank, authority, or quality, and it doesn't fit the context.

S26. Ans.(e)

Sol. The correct answer is: **"all of these"**.

Explanation:

Let's go through each statement and analyze how the word "interest" has been used correctly:

(i) She developed a keen interest in painting during her college years and has since become a talented artist.

In this sentence, "interest" is used correctly to describe her fascination or passion for painting. It indicates that she has a strong attraction or curiosity towards painting, and this interest has led her to become a talented artist. The usage here is both contextually and grammatically correct.

(ii) The company's new product generated a lot of interest among consumers due to its innovative features.

In this sentence, "interest" is used correctly to describe the attention and curiosity that consumers have shown in the company's new product. It implies that people are intrigued or enthusiastic about the product because of its innovative features. The usage is both contextually and grammatically correct.

(iii) Sarah's interest in environmental conservation led her to volunteer at a local wildlife sanctuary.

In this sentence, "interest" is used correctly to express Sarah's concern or passion for environmental conservation. It indicates that Sarah has a genuine desire or commitment to protecting the environment, and this interest motivates her to volunteer at a wildlife sanctuary. The usage is both contextually and grammatically correct.

So, in all three statements, the word "interest" has been used correctly to convey the idea of fascination, curiosity, or passion, making the correct answer (e) All of these.

S27. Ans.(d)

Sol. The correct answer is: **"is growing across all price segments"**.

Let's break down the sentence and analyze why the highlighted phrase is incorrect and why the other options are incorrect:

Original Sentence: "Demand for electronics is growing of all price segments, even as the production of these devices entails the use of scarce elements and high emissions."

Highlighted Phrase: "is growing of all price segments"

Analysis: The phrase "is growing of all price segments" is grammatically incorrect in this context because it doesn't convey the intended meaning. The sentence is trying to express that the demand for electronics is increasing across all price ranges or categories. The use of "of" is incorrect here, and it should be replaced with a preposition that properly conveys this idea.

Now, let's analyze the provided options:

(a) **is grown over all price segment:** This option uses the phrase "over- all price segment," which is not a suitable replacement for the original phrase. It doesn't convey the correct meaning.

(b) **is growing across all price segment:** This option uses "across all price segment," which is closer to the correct phrasing but still contains the same error as the original sentence. It should be "price segments" instead of "price segment."

(c) **is growing for all price segments:** This option is not completely correct "for all price segments," as it slightly changes the meaning of the sentence. The phrase "is growing for all price segments" implies that the growth is in favor of all price segments, which might not be the intended meaning. The original sentence suggests that demand is increasing in all price segments, not necessarily for their benefit.

(d) **is growing across all price segments:** This option is the correct choice as it uses the preposition "across" with the plural form "price segments," which accurately conveys that the demand for electronics is increasing in all price categories.

In conclusion, option (d) **"is growing across all price segments"** is the correct choice because it fixes the grammatical error in the original sentence and accurately conveys the intended meaning.

S28. Ans.(e)

Sol. In the original sentence, the highlighted phrase "may have sensed they would get support" is grammatically and contextually correct. Hence, no correction required.

S29. Ans.(b)

Sol. The correct answer is: **"sessions are typically held in each"**.

Let's break down the sentence and analyze why the highlighted phrase is incorrect, as well as why the other options are incorrect:

Original Sentence: "Although the Constitution doesn't provide for a fixed number of sessions or days of sitting, three sessions are typical held in each calendar year."

Highlighted Phrase: "sessions are typical held in each"

Analysis: The highlighted phrase "sessions are typical held in each" contains a grammatical error. The word "typical" is used incorrectly. The phrase "sessions are typical held in each" is not grammatically accurate. The option (b) corrects this error by using "sessions are typically held in each." This change maintains proper subject-verb agreement, and it correctly places the adverb "typically" before the verb "held" to indicate that three sessions are typically held each calendar year. It makes the sentence grammatically correct and conveys the intended meaning accurately.

Now, let's analyze the provided options:

(a) **"session are typically held in each"**: This option uses the plural verb "are" with the singular subject "session," which is a subject-verb agreement error.

(b) **"sessions are typically held in each"**: This option correctly uses the adverb "typically" before the verb "held" making it grammatically correct. This is the correct choice.

(c) **"sessions are typically hold in each"**: This option uses the incorrect verb form "hold," which should be "held" to maintain the proper tense.

(d) **"sessions is typically held in each"**: This option uses the singular verb "is" with the plural subject "sessions," which is a subject-verb agreement error.

In conclusion, **option (b) "sessions are typically held in each"** is the correct choice because it corrects the subject-verb agreement error by using the plural verb "are" with the plural subject "sessions" and using the correct adverb "typically" to make the sentence meaningful.

S30. Ans.(c)

Sol. The correct answer is: **"is undergoing a churn too, driven by"**.

Let's analyze the sentence and identify the issues with the highlighted phrase, as well as explain why the incorrect options are not suitable.

Original Sentence: "The ceiling fan market are undergoing a churn too, driven by policy imperatives and a regulation change."

Highlighted Phrase: "are undergoing a churn too, driven by"

Analysis: The highlighted phrase "are undergoing a churn too, driven by" has a subject-verb agreement error. The subject "market" is singular, but the verb "are" is plural. The correct form should be "market is undergoing" to match the singular subject "market."

Now, let's examine the provided options:

(a) **"is undergoing a churn too, driven for"**: This option replaces the verb "are" with "is," which is the correct singular form. However, it introduces the preposition "for" after "driven," which does not fit the context. The correct preposition is "by" to indicate the cause or reason for the churn.

(b) **"is undergoing a churn to, driven by"**: This option replaces "are" with "is," which is correct. However, it introduces "to" after "churn," which changes the meaning of the sentence and is not suitable in this context. "By" is the correct preposition to indicate the cause or reason.

(c) **"is undergoing a churn too, driven by"**: This option is the correct choice. It corrects the subject-verb agreement error by using the singular verb "is" with the singular subject "market." It also correctly uses "driven by" to indicate the cause of the churn.

(d) **"is undergone a churn too, driven by"**: This option uses the past participle "undergone" instead of the present participle "undergoing," which is incorrect. It should describe the ongoing action of the market, so "undergoing" is the appropriate form.

In conclusion, option (c) "is undergoing a churn too, driven by" is the correct choice as it corrects the subject-verb agreement error and maintains the correct preposition "by" to indicate the cause of the churn.

S31. Ans.(e)**Sol.**

Pattern of series –

$$\begin{array}{cccccc}
 20, & 32, & 47, & 57, & 74, & ? = 80 \\
 +12 & +15 & +10 & +17 & +6 & \\
 & +3 & -5 & +7 & -11 &
 \end{array}$$

S32. Ans.(c)**Sol.**

Pattern of series –

Pattern of series –

$$\begin{array}{cccccc}
 32, & 40 & 53, & 76, & ? = 114, & 172 \\
 +8 & +13 & +23 & +38 & +58 & \\
 & +5 & +10 & +15 & +20 &
 \end{array}$$

S33. Ans.(b)**Sol.**

Pattern of series –

$$\begin{array}{cccccc}
 40, & 66, & 116, & 198, & 320, & ? = 490 \\
 +26 & +50 & +82 & +122 & +170 & \\
 & +24 & +32 & +40 & +48 & \\
 & & +8 & +8 & +8 &
 \end{array}$$

S34. Ans.(d)**Sol.**

Pattern of series –

$$\begin{array}{cccccc}
 80, & ? = 92, & 117, & 168, & 271, & 478 \\
 +12 & +25 & +51 & +103 & +207 & \\
 & +13 & +26 & +52 & +104 &
 \end{array}$$

S35. Ans.(a)**Sol.**

Pattern of series –

$$100 + 61 = 161$$

$$161 + 67 = 228$$

$$228 + 71 = 299$$

$$299 + 73 = 372$$

$$372 + 79 = 451$$

S36. Ans.(c)**Sol.**

Pattern of series –

$$500 \times \frac{10}{100} = 50$$

$$50 \times \frac{20}{100} = 10$$

$$10 \times \frac{30}{100} = 3$$

$$3 \times \frac{40}{100} = 1.2$$

$$1.2 \times \frac{50}{100} = 0.6$$

S37. Ans. (a)**Sol.**Let the cost price be $100x$.

$$\text{And marked price} = 100x \times \frac{120}{100} = 120x$$

ATQ,

$$120x \times \left(\frac{100-d}{100} \right) = 100x \times \left(\frac{100-(d-11)}{100} \right)$$

$$\frac{6}{5} = \frac{100-d+11}{100-d}$$

$$600 - 6d = 500 - 5d + 55$$

$$600 - 500 - 55 = d$$

$$d = 45\%$$

$$\text{Selling price of Q} = 200 \times (100 + 1.5d)\% = \text{Rs. 335}$$

S38. Ans. (a)**Sol.**

Cumulative interest for 2 years and 10 days as 2 years approximately.

$$\text{Rate of interest} = 11 + 11 + \frac{11 \times 11}{100} = 22 + 1.21 = 23.21\%$$

$$\text{Compound interest} = 20000 \times \frac{23.21}{100} = \text{Rs. 4642}$$

$$\text{Amount} = 20000 + 4642 = \text{Rs. 24642}$$

$$\text{Simple interest} = \frac{24642 \times 2 \times 11}{100} = \text{Rs. 5421.24} = \text{Rs. 5421}$$

S39. Ans. (d)**Sol.**Let the quantity of milk and water be $300x$ and $200x$ respectively.

$$\text{Taken out quantity} = 75x \times \frac{(300+200)x}{100} = 375 \text{ liter}$$

$$\text{Quantity of milk taken out} = 375 \times \frac{3}{5} = 225x$$

$$\text{Quantity of water taken out} = 375 \times \frac{2}{5} = 150x$$

$$\text{Water added} = 40 \times \frac{60}{100} = 24 \text{ liter}$$

$$\text{Milk added} = 40 \times \frac{40}{100} = 16 \text{ liter}$$

ATQ,

$$\frac{300x - 225x + 16}{200x - 150x + 24} = \frac{\frac{400}{9}}{100 - \frac{400}{9}}$$

$$\frac{75x + 16}{50x + 24} = \frac{4}{5}$$

$$375x + 80 = 200x + 96$$

$$175x = 16$$

$$x = \frac{16}{175}$$

$$\text{Quantity of milk initially} = \frac{16}{175} \times 300 = \frac{192}{7} \text{ liters}$$

S40. Ans. (a)**Sol.**

Total work completed by A, B and C = $2 \times \frac{3}{2} = 3 \text{ days}$

Total work completed by A and B together = $\frac{100}{30} \times 3 = 10 \text{ days}$

Total work = 30 (LCM of 3 and 10)

Efficiency of C = $\frac{30}{3} - \frac{30}{10} = 10 - 3 = 7 \text{ unit/day}$

Required time = $\frac{\frac{14}{3} \times 30}{7} = 20 \text{ days}$

S41. Ans.(b)**Sol.** I. $4x^2 + 10x + 10x + 25 = 0$

$$2x(2x+5) + 5(2x+5) = 0$$

$$(2x+5)(2x+5) = 0$$

$$x = -2.5, -2.5$$

$$\text{II. } 2y^2 + 5y + 6y + 15 = 0$$

$$y(2y+5) + 3(2y+5) = 0$$

$$(y+3)(2y+5) = 0$$

$$y = -2.5 - 3$$

So, $x \geq y$

S42. Ans.(e)**Sol.**

$$\text{I. } 3x^2 - 9x - 5x + 15 = 0$$

$$3x(x-3) - 5(x-3) = 0$$

$$(3x-5)(x-3) = 0$$

$$x = 3, \frac{5}{3}$$

$$\text{II. } 6y^2 - 31y + 18 = 0$$

$$6y^2 - 27y - 4y + 18 = 0$$

$$3y(2y-9) - 2(2y-9) = 0$$

$$(3y-2)(2y-9) = 0$$

$$y = \frac{9}{2}, \frac{2}{3}$$

So, no relation

S43. Ans.(a)**Sol.**

$$\text{I. } 4x^2 - 8x - 8x + 16 = 0$$

$$4x(x-2) - 8(x-2) = 0$$

$$(4x-8)(x-2) = 0$$

$$x = 2, 2$$

$$\text{II. } 10y^2 - 15y - 14y + 21 = 0$$

$$5y(2y-3) - 7(2y-3) = 0$$

$$(5y-7)(2y-3) = 0$$

$$y = \frac{7}{5} \text{ and } \frac{3}{2}$$

So, $x > y$

S44. Ans. (d)**Sol.**

$$\text{I. } 3x^2 - 37x + 114 = 0$$

$$3x^2 - 19x - 18x + 114 = 0$$

$$x(3x-19) - 6(3x-19) = 0$$

$$(x-6)(3x-19) = 0$$

$$x = \frac{19}{3}, 6$$

$$\text{II. } 3y^2 - 46y + 171 = 0$$

$$3y^2 - 27y - 19y + 171 = 0$$

$$3y(y-9) - 19(y-9) = 0$$

$$(3y-19)(y-9) = 0$$

$$y = \frac{19}{3}, 9$$

So, $x \leq y$

S45. Ans.(d)**Sol.**

$$\text{I. } 2x^2 + 13x - 150 = 0$$

$$2x^2 - 12x + 25x - 150 = 0$$

$$2x(x-6) + 25(x-6) = 0$$

$$(2x+25)(x-6) = 0$$

$$x = -12.5, 6$$

$$\text{II. } y^2 - 17y + 66 = 0$$

$$y^2 - 11y - 6y + 66 = 0$$

$$y(y-11) - 6(y-11) = 0$$

$$(y-6)(y-11) = 0$$

$$y = 11, 6$$

So, $x \leq y$

Sol. (46-51):

For Club A, Total people visited = $2500 \times \frac{24}{100} = 600$

Total male visited = $1200 \times \frac{20}{100} = 240$

So, total female visited = $600 - 240 = 360$

For club B, Total people visited = $2500 \times \frac{16}{100} = 400$

Total male visited = $1200 \times \frac{15}{100} = 180$

Total female visited = $400 - 180 = 220$

For club C, total people visited = $2500 \times \frac{18}{100} = 450$

Total male visited = $1200 \times \frac{35}{100} = 420$

Total female visited = $450 - 420 = 30$

For club D, total people visited = $2500 \times \frac{30}{100} = 750$

Total male visited = $1200 \times \frac{12}{100} = 144$

Total female visited = $750 - 144 = 606$

For club E, total people visited club E = $2500 \times \frac{12}{100} = 300$

Total male visited = $1200 \times \frac{18}{100} = 216$

Total female visited = $300 - 216 = 84$

Clubs	Total people	Total males	Total females
A	600	240	360
B	400	180	220
C	450	420	30
D	750	144	606
E	300	216	84

S46. Ans.(d)**Sol.**

Total females visited club B and C = $(220 + 30) = 250$

Required percentage = $\frac{250}{750} \times 100 = 33.33\%$

S47. Ans.(b)**Sol.**

Total females visited club F = $84 \times \frac{125}{100} = 105$

Total people visited club F = $144 \times \frac{11}{9} = 198$

So, Total males visited club F = $198 - 105 = 93$

Required ratio = $\frac{93}{216} = 31:72$

S48. Ans.(c)**Sol.**

Total number of females visited club X = $126 \times 3 - (220 + 84) = 74$

Total males visited club X = $240 \times \frac{45}{100} = 108$

Required difference = $(360 + 30) - (108 + 74) = 208$

S49. Ans.(c)**Sol.**

Total revenue for club A by total males = $240 \times 150 = 36000$ Rs

Total revenue for club B by total males = $180 \times 200 = 36000$ Rs

Total revenue for club E by total males = $216 \times 250 = 54000$ Rs

Required revenue = $36000 + 36000 + 54000 = 126000$ Rs

S50. Ans.(e)**Sol.**

Total Females visited clubs D and E = $606 + 84 = 690$

Total females visited clubs A and B = $360 + 220 = 580$

Required parentage = $\frac{690-580}{580} \times 100 = 18.96 = 19\%$

S51. Ans.(c)**Sol.**

Total males whose age below 25 years in club C = $(420 - 20) \times \frac{3}{8} = 150$

Total males whose age below 25 years in club B = $(220 - 40) \times \frac{2}{3} = 120$

Required sum = $150 + 120 = 270$

Sol (52 – 57):

ATQ,

$$15x - 2y + y = 50$$

$$15x - y = 50 \dots(i)$$

$$16x + 9y = 154 \dots(ii)$$

Solving (i) and (ii)

$$x = 4 \text{ and } y = 10$$

Cities	Males in Private company	Males in Public company	Females (private + public)
A	15x - 2y = 60 - 20 = 40	y = 10	55
B	16x = 64	16	108
C	9y = 90	24	74
D	84	21	85

Q52. Ans. (a)**Sol.**

Females working in public companies from A =

$$\frac{60}{100} \times 55 = 33$$

$$\text{Required ratio} = 33 : (84 + 21) = 33 : 105 = 11 : 35$$

S53. Ans. (a)**Sol.**

Females working in private company from B =

$$\frac{24 \times 5}{4} = 30$$

Females working in public company from B = 108 - 30 = 78

$$\text{Required percentage} = \frac{78}{10} \times 100 = 780\%$$

S54. Ans. (d)**Sol.**

$$\text{Males in F} = 2 \times 200 - (90 + 24) = 286$$

$$\text{Total employees in F} = 286 \times \frac{100}{20} = 1430$$

$$\text{Required answer} = 1430 - 1000 = 430$$

S55. Ans. (d)**Sol.**

Total females working in public company from all the cities = 50% of (55 + 108 + 74 + 85) = 161

$$\text{Total employees working in public company} = 161 + 71 = 232$$

S56. Ans. (d)**Sol.**

$$\text{Average} = \frac{40 + 64 + 90 + 84}{4} = 69.5$$

Only in city A & B, the males are less the average males.

S57. Ans. (d)**Sol.**

$$\text{Required percentage} = \frac{90 + 24}{108} \times 100 = 105.55 = 106\%$$

S58. Ans. (b)**Sol.**

$$\text{ATQ, } \frac{8a + 4}{11a - 10} = \frac{3}{4}$$

$$32a + 16 = 33a - 30$$

$$a = 46$$

$$\text{So, fraction} = \frac{372}{496}$$

$$\text{Now, required value} = \frac{372 - 4}{496 - 10} = \frac{368}{486} = \frac{184}{243}$$

S59. Ans. (d)**Sol.** Let speed of boat in still water be x km/hr and speed of stream be y km/hr

$$\frac{x - y}{x + y} = \frac{3}{5}$$

$$5x - 5y = 3x + 3y$$

$$2x = 8y$$

$$x = 4y$$

$$\text{ATQ, } t = \frac{90}{5y}$$

$$t = \frac{18}{y} \dots\dots(i)$$

$$\text{And } t = \frac{72}{3y} - 1$$

$$t = \frac{24 - y}{y} \dots\dots(ii)$$

From (i) and (ii) we get -

$$y = 6$$

$$\text{So, } x = 24$$

$$\text{Required speed} = (24 + 6) = 30 \text{ km/hr}$$

S60. Ans.(c)**Sol.** let speed of the train be s km/hr

$$s = \frac{240}{x} \text{ -----(i)}$$

$$s = \frac{600}{(x+9)} \text{ -----(ii)}$$

From (i) and (ii) we get -

$$\frac{240}{x} = \frac{600}{x+9}$$

$$5x = 2x + 18$$

$$x = 6$$

$$\text{So, speed of train} = \frac{240}{6} = 40 \text{ m/sec}$$

$$\text{Required time} = \frac{240}{40 - 36 \times \frac{5}{18}} = 8 \text{ seconds}$$

S61. Ans.(d)**Sol.**

Let length & breadth of rectangle be 'l' & 'b' respectively

ATQ -

$$\frac{l \times (b+4) - (l-4) \times b}{lb} = \frac{4}{9}$$

$$9(4l + 4b) = 4lb$$

$$9(2l + 2b) = 2lb$$

$$(2l + 2b) : lb = 2 : 9$$

S62. Ans (e)**Sol.**

Profit sharing ratio of A to B

$$= 5X \times 12 : (5X - 400) \times 6 + (5X - 400 + 200) \times 6$$

$$= 5X \times 12 : 6 \times (5X - 400 + 5X - 200)$$

$$= 5X \times 12 : 6 \times (10X - 600)$$

ATQ,

$$\frac{5X \times 12}{6 \times (10X - 600)} = \frac{600}{510}$$

$$17X = 20X - 1200$$

$$3X = 1200$$

$$X = 400$$

S63. Ans (b)**Sol.**

Let monthly salary of A be Rs.100x

Expenditure on house rent = Rs. 20x

$$\text{Expenditure on travelling} = (100x - 20x) \times \frac{25}{100} = \text{Rs. } 20x$$

$$\text{Expenditure on food} = (100x - 20x - 20x) \times \frac{3}{8} = \text{Rs. } 22.5x$$

$$\text{Expenditure on children's education} = (100x - 20x - 20x) \times \frac{5}{8} = \text{Rs. } 37.5x$$

ATQ,

$$37.5x - 20x = 700$$

$$x = 40$$

$$\text{Monthly salary of A} = 40 \times 100 = \text{Rs. } 4000$$

S64. Ans.(b)**Sol.**

ATQ, Given Man age = 34 years

Man's wife age = 34 - 5 = 29 years

$$3q + 2p = 34 \text{ -----(1)}$$

$$\text{Also, } p - q = 3 \text{ -----(2)}$$

Solving (1) & (2),

$$p = 8, q = 5$$

$$\text{required average age} = \frac{34+29+8+5}{4} = 19 \text{ years}$$

S65. Ans.(c)**Sol.**

Approx. value asked

$$\text{Initial quantity of milk in vessel} = 80 \times \frac{3}{5} = 48 \text{ liters}$$

$$\text{Initial quantity of water in vessel} = 80 - 48 = 32 \text{ liters}$$

Let quantity of milk in the mixture mixed later = x liters

$$\text{So, quantity of water in the mixture mixed later} = (60 - x)$$

$$\text{ATQ, } \frac{48 - 20 \times \frac{3}{5} + x}{32 - 20 \times \frac{2}{5} + (60 - x)} = \frac{2}{1}$$

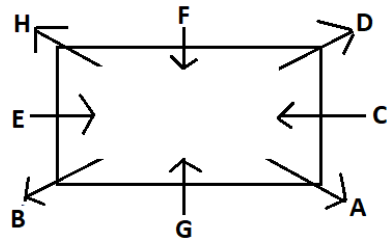
$$\frac{36 + x}{84 - x} = \frac{2}{1}$$

$$36 + x = 168 - 2x$$

$$x = 44$$

$$\text{Quantity of water} = 60 - x = 60 - 44 = 16$$

Directions (66-70):
Sol.



S66. Ans. (c)
Sol. "A"

S67. Ans. (b)
Sol. "Three"

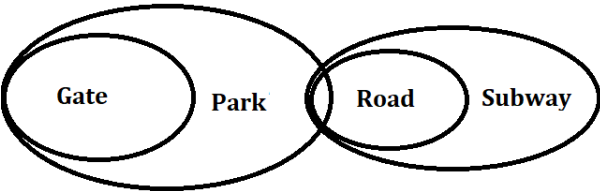
S68. Ans. (d)
Sol. "H"

S69. Ans. (b)
Sol. "C"

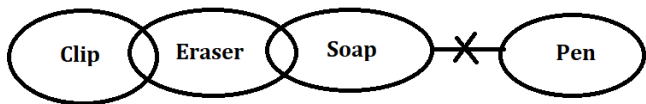
S70. Ans. (a)
Sol. "B"

Directions (71-73):

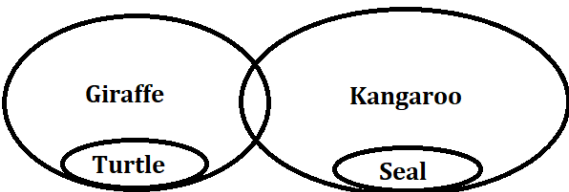
S71. Ans. (b)
Sol.



S72. Ans. (c)
Sol.



S73 Ans. (b)
Sol.



S74. Ans. (a)
S75. Ans. (e)

Directions (76-80):
Sol.

Box	Fruits
E	Orange
A	Guava
C	Mango
B	Banana
D	Apple

S76. Ans. (a)
Sol. "Box A"

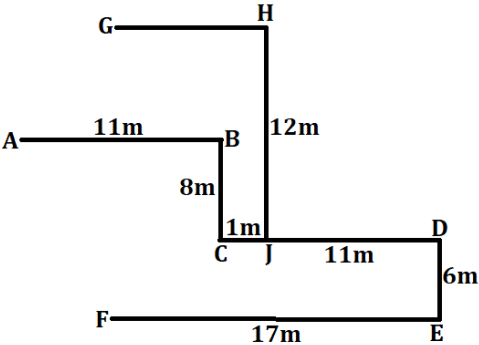
S77. Ans. (d)
Sol. "Three"

S78. Ans. (b)
Sol. "Box A"

S79. Ans. (d)
Sol. "Two"

S80. Ans. (a)
Sol. "Box D"

Directions (81-83):



S81. Ans. (b)
Sol. The shortest distance between Point G and Point F is 18m

S82. Ans. (c)
Sol. Point F is South-west of Point D

S83. Ans. (c)
Sol. Point G is North-west of Point E

Directions (84-88):

Final arrangement:

Months	Dates	Persons	States
May	9 th	R	Kerala
	26 th	U	Goa
June	9 th	P	Odisha
	26 th	S	Assam
July	9 th	T	Delhi
	26 th	Q	Sikkim

S84. Ans. (a)

Sol. The person who travels to Assam travels in the month of June

S85. Ans. (d)

Sol. S travels on 26th June

S86. Ans. (b)

Sol. Three persons travel after the person who travel to Odisha

S87. Ans. (d)

Sol. Q travels to Sikkim

S88. Ans. (c)

Sol. Combination in option(c) is correct

S89. Ans. (a)

Sol.



Directions (90-94):

City	Person
Barcelona	Q, V, N
Dehradun	P, Z
Texas	Y, L, O, W

S90. Ans. (c)

S91. Ans. (c)

S92. Ans. (d)

S93. Ans. (b)

S94. Ans. (a)

Directions (95-97):

S95. Ans. (a)

Sol. I. $I < X$ (True)

II. $R > U$ (False)

S96. Ans. (d)

Sol. I. $7 > 6$ (False)

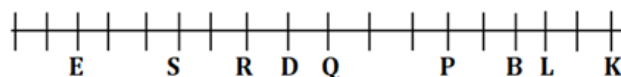
II. $1 > 2$ (False)

S97. Ans. (c)

Sol. I. $E > N$ (False)

II. $H \geq E$ (False)

Directions (98-100):



S98. Ans. (b)

S99. Ans. (a)

S100. Ans. (c)