## Bank Foundation Prelims Mock 2

## Directions (1-8): Read the passage carefully and answer the given questions based on that

Researchers have proved that long hours of uninterrupted sitting can lead to a number of health complications. This growing concern has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organizing ergonomic sessions, stressing the importance of right sitting posture and regular exercise.
Sitting for long working hours leads to high blood pressure and elevated cholesterol which can increase the risk of cardiovascular complications. When a person sits for long hours, cells in the body muscles do not readily respond to insulin produced by the pancreas. As a result, pancreas produces more insulin which can lead to diabetes. Sedentary lifestyle can lead to a person $\qquad$ hyperlordosis, tight hips and lump glutes. Long hours of sitting can impact the blood flow in the body causing fluid to puddle in legs. This can lead to deep vein thrombosis (DVT). Muscles in motion trigger the release of mood enhancing hormones by supplying fresh blood and oxygen through the brain. Therefore, when a person sits for long hours the stress level increases.
When a person complains of postural problems, a confirmation is done by an X-ray or MRI scan. Appropriate exercises are suggested to correct the damage. Patients are also recommended to undergo physiotherapy sessions, if required. To avoid health hazards associated with a sedentary lifestyle, make sure you follow these simple exercises. Performing yoga in the morning or evening hours can be beneficial. Take a five-minute stroll for every hour you sit. Instead of walking at a stretch, make sure that you take small breaks from your work. This will improve blood circulation in the body. Stretch your legs and arms every hour in office. When you are at home, stretch hip flexors every evening/morning for five minutes per side. Stretch your legs and arms every hour in office. When you are at home, stretch hip flexors every evening/morning for five minutes per side. While sitting, make sure you sit in an upright position without crouching. Ensure that you get good back rest with feet flat on the floor. Sit straight and drop head slowly to one side, taking ear towards the shoulder. Make sure that you feel the stretch.

## Q1. How are corporates dealing with the looming menace of long work desk culture?

(a) They are moving to standing work desk culture
(b) They are providing sessions to educate their employees about sitting posture and the importance of regular exercise
(c) They are organising gym sessions for their employees
(d) Only options (a) and (b)
(e) All of these

## Q2. How does sedentary lifestyle lead to diabetes?

(a) Due to a sedentary lifestyle and an unhealthy diet, body is unable to burn the excess carbohydrate and results in diabetes.
(b) The body muscles fail to respond to the insulin produced by the pancreas due to sedentary lifestyle and eventually it leads to diabetes.
(c) Due to inactive lifestyle, body muscles release antidiuretic hormone which disbalances the insulin level in body, resulting in diabetes.
(d) Only (a) and (c)
(e) None of these

Q3. How do long sitting hours promote stress?
(a) Excessively long sitting habits induce pancreatic juice which promotes stress.
(b) Sedentary lifestyle hampers the relationship between a person and his family members.
(c) An inactive lifestyle inhibits the production of mood enhancing hormones thus induces stress.
(d) An inactive lifestyle leads to many distinct behaviors which in future result in stress.
(e) None of these


Q4. How is a postural problem rectified?
(a) Consultation is required for diagnosing a postural defect.
(b) Upon the onset of a sedentary lifestyle, symptoms of postural problems let themselves known.
(c) People having an inactive lifestyle should take regular breaks from work.
(d) Upon confirmation of the problem, exercises and physiotherapy sessions are recommended.
(e) X-Ray and MRI scans are required to identify problems arising from incorrect posture.

Q5. Which of the following is/are suggestions for avoiding health hazards arising from a sedentary lifestyle?
(a) Regular exercises and yoga
(b) Taking short breaks in physical inactive periods
(c) Stretching legs and arms and hip flexors
(d) Only options (a) and (c)
(e) All of these

Q6. Which of the following words can suitably fill the blank in the passage?
(a) developing
(b) involving
(c) correcting
(d) containing
(e) relating

Q7. Choose the synonym for the word highlighted word "enhancing" as it is given in the passage.
(a) combining
(b) intensifying
(c) connecting
(d) demolishing
(e) dismantling

Q8. Choose the antonym for the word highlighted word "improve" as it is given in the passage.
(a) disprove
(b) impair
(c) ameliorate
(d) revamp
(e) raise

Q9. In the following question, four sentences are given which may or may not be grammatically and contextually correct. You need to find the one which does not have any error and mark that as your answer. If none of the given sentences is correct then mark 'none of these' as your answer.
(a) Liberalisation of energy has been one of the great achievement of the EU's common market.
(b) India has been grows in population at a faster rate for decades, albeit slowing recently.
(c) Even today, the ancient system of Ayurveda serves the health-care needs of millions at Indians.
(d) Jill asked the apartment manager to acquaint her with the layout of the property.
(e) All are incorrect

Q10. In the following question, four sentences are given which may or may not be grammatically and contextually correct. You need to find the one which does not have any error and mark that as your answer. If none of the given sentences is correct then mark 'none of these' as your answer.
(a) America's national security adviser said Russia's heavy shelling in eastern Ukraine was depleting it's store of weapons.
(b) While the minister preached about the need for righteous behaviour, out of church they were a thief and a fraudster.
(c) The euro recently fell to a 20-year low, bringing the currency to within one cent of parity with the dollar.
(d) The fundraiser was not wholly successful because we fails to reach our goal by nearly a thousand dollars.
(e) All are incorrect

Q11. In the following question, four sentences are given which may or may not be grammatically and contextually correct. You need to find the one which does not have any error and mark that as your answer. If none of the given sentences is correct then mark 'none of these' as your answer.
(a) As a loyal husbands, Barry is very attentive to the needs of his wife Drew.
(b) Without sleep, you are likely to have a lapse in reason, being unable to thinking clearly.
(c) Listening to the politician's promises made the audience hopeful for the country's future.
(d) Before returning from vacation, I purchased an extravagantly trinket for my daughter.
(e) All are incorrect

Q12. In the following question, four sentences are given which may or may not be grammatically and contextually correct. You need to find the one which does not have any error and mark that as your answer. If none of the given sentences is correct then mark 'none of these' as your answer.
(a) Leonardo da Vinci is known for many thing, but the Mona Lisa was his great magnum opus.
(b) In the more secluded parts of the village, their were no roads and doctors visited rarely.
(c) A first-quarter loss in April prompted the worst sell-off of Amazon's shares from 2006.
(d) The potential market for technology products has been expanding hugely in the past decade.
(e) All are incorrect

Q13. In the following question, four sentences are given which may or may not be grammatically and contextually correct. You need to find the one which does not have any error and mark that as your answer. If none of the given sentences is correct then mark 'none of these' as your answer.
(a) The newly appointed chancellor pledged to scrap a plan to raised corporation tax next year if he is chosen.
(b) The toddler stood on her tippy toes and tried to reach the light switch, but she was just a little to short to turn it on.
(c) After listening to the radio talk show host jabber about nonsense I switched the dial for some calming music.
(d) I resented the fact that my company thought it could coax me for accepting a demotion amicably.
(e) All are incorrect

Directions (14-15): In the following questions, a sentence is given with a blank followed by five options. Choose the most suitable phrase that can fill the blank and make the sentence grammatically and contextually correct.

Q14. A large number of giant Sequoia trees growing on the western slopes of the Sierra Nevada destroyed in the recent wildfire.
(a) are said to be
(b) had been said to be
(c) have been reported to be
(d) having been reported as
(e) are reported to be

Q15. The exhibition, $\qquad$ by artists from all sections of society, was largely considered to be a success.
(a) which showcased artwork
(b) having showcased
(c) which showcases
(d) which had been showcased
(e) having been showcased

Directions (16-20): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, options are given. Find out the appropriate word which fits into the blank appropriately.

Q16. Many plastics that bear the biodegradable label can only be composted in industrial settings, but researchers have found that by adding sugar units to polymers, they become more $\qquad$ (16) under UV light. Researchers in the U.K. have developed a novel method to break down plastics using just ultraviolet (UV) light. Researchers at the University of Bath discovered that adding sugar units to polymers increases their degradability when exposed to UV radiation. The research, recently $\qquad$ (17) in the journal Chemical Communications, demonstrated a method that could increase the rate at which these polymers $\qquad$ (18) in the environment. The researchers found that by ___ (19) various quantities of sugar molecules to the polymer, they could modify how quickly the plastic degrades.

The technology is compatible with existing plastic manufacturing processes, meaning it could $\qquad$ (20) be tested and adopted quickly by the plastics industry, the researchers said. They hope their findings will be used in the future by the plastics industry to help make plastic waste more degradable at the end of the life of the product.
(a) able
(b) suitable
(c) degradable
(d) palpable
(e) manageable

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(a) published
(b) perished
(c) trashed
(d) relished
(e) rushed

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(a) invade
(b) remade
(c) crusade
(d) degrade
(e) fade

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(a) cutting
(b) adding
(c) keep
(d) rising
(e) ending

Q20. Many plastics that bear the biodegradable label can only be composted in industrial settings, but researchers have found that by adding sugar units to polymers, they become more $\qquad$ (16) under UV light. Researchers in the U.K. have developed a novel method to break down plastics using just ultraviolet (UV) light. Researchers at the University of Bath discovered that adding sugar units to polymers increases their degradability when exposed to UV radiation. The research, recently $\qquad$ (17) in the journal Chemical Communications, demonstrated a method that could increase the rate at which these polymers
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(a) characterise
(b) furthering
(c) potentially
(d) ground
(e) amending

Directions (21-25): Given below the sentences each of which has been divided into four parts Each of the questions is then followed by the five options which give the sequence of the rearranged parts. You must choose the option which gives the correct sequence of the parts. If the sentence is already arranged in the correct sequence or the correct sequence doesn't match with any of the given sequence, mark option (e).i.e. " No arrangement required " as your answer.

Q21. the cosmos in infrared frequencies, (A) / the JWST provides astronomers with (B) / the most powerful tool yet to scan (C) / picking up the most distant objects (D).
(a) ADBC
(b) CBAD
(c) BCAD
(d) DABD
(e) No rearrangement required

Q22. environmental movement has begun (A) / to take a more confrontational approach (B) / these days, America's mainstream (C) / in its protests and demonstrations (D).
(a) CABD
(b) DACB
(c) BACD
(d) ACBD
(e) No rearrangement required

Q23. hospitalisation, preventing severe (A) / disease, and even death (B) / currently available vaccines have (C) / a higher protective effect against (D).
(a) BADC
(b) ADBC
(c) ACBD
(d) CDAB
(e) No rearrangement required

Q24. to help plan for and preserve mental (A) / teenagers take proactive steps now (B) / well-being during their transition to college (C) / it is essential that parents and (D)
(a) ABDC
(b) DBAC
(c) CABD
(d) DABC
(e) No rearrangement required

Q25. Aristotle to Siddhartha have long known (A) / ancient philosophers from (B)/ that the outdoors can be (C) / an emotional and mental balm (D).
(a) DACB
(b) BACD
(c) CABD
(d) BDAC
(e) No rearrangement required

Directions (26-30): In each sentence four words are given in bold. In which one word is either misspelt or grammatically inappropriate, choose it as your answer. If all the words are correct choose option [e], i.e., No Error.

Q26. India has been registering (A) instances of anomalous weather with alarming (B) frequency with an eratic (C) monsoon and coastal erosion (D).
(a) registering
(b) alarming
(c) eratic
(d) erosion
(e) All are correct

Q27. Awe (A) is the sensasion (B) of being confronted (C) by something so vast that it forces us to reconsider (D) our understanding of the world.
(a) Awe
(b) sensasion
(c) confronted
(d) reconsider
(e) All are correct

Q28. According to rescent (A) reports, Infosys's profit (B) has risen 1.5 times in the last 5 years, but equity ( $C$ ) capital (D) has grown only about 1.1 times
(a) rescent
(b) profit
(c) equity
(d) capital
(e) All are correct

Q29. A growing number of organisations (A) have sprung up across the world encouraging (B) people to step outdoors (C) as a way to improve (D) mental health.
(a) organisations
(b) encouraging
(c) outdoors
(d) improve
(e) All are correct

Q30. As capital allocators (A), it is important for companies to preserve (B) and grow their capital during periods (C) of macroeconomic uncertainity (D).
(a) allocators
(b) preserve
(c) periods
(d) uncertainity
(e) All are correct

Q31. An article sold at 4/5 of its original selling price, then it gives a profit of $\mathbf{2 0 \%}$. Find the profit percentage, when the same article is sold at its actual selling price?
(a) $15 \%$
(b) $20 \%$
(c) $25 \%$
(d) $22 \%$
(e) $50 \%$

Q32. A sum of Rs. $x$ was invested at $\mathbf{1 0 \%}$ simple interest for 3 years. If the same sum was invested at $4 \%$ more for same period, then it would have fetched Rs. 120 more. Find the value of $5 x$. (in Rs.)?
(a) 5000
(b) 4800
(c) 3600
(d) 5500
(e) 4000

Q33. 4 men \& 3 children complete a project for Rs. 600 in 3 days. If a man completes same project in 15 days, then find daily wage of a man?
(a) Rs 36
(b) Rs 40
(c) Rs 44
(d) Rs 48
(e) Rs 42

Q34. A tank is normally filled in 15 hours but due to a leak in the tank, it takes $\mathbf{3}$ hours more to be filled. If the tank is completely filled, then the leak will empty it in how many hours?
(a) 72
(b) 84
(c) 90
(d) 60
(e) 75

Q35. Average of eight consecutive odd numbers is 10. What will be the average of smallest four numbers out of eight numbers?
(a) 7
(b) 8
(c) 6
(d) 4
(e) 5

Q36. A person is 16 years older than his son. After two years, the person's age will be double the age of his son. Find the age of his son eight years hence will be?
(a) 24 years
(b) 20 years
(c) 22 years
(d) 18 years
(e) 28 years

Q37.If the length and breadth of a rectangle is increased by $\mathbf{2 0 \%}$ and $\mathbf{1 0 \%}$ respectively, then find the percentage increase in the area of the rectangle?
(a) $36 \%$
(b) $32 \%$
(c) $28 \%$
(d) $40 \%$
(e) $34 \%$

Q38.Acontainer is full of $\mathbf{7 5}$-liter milk. If $\mathbf{1 5}$-liter content of container is replaced by water and the same process is further repeated two times, then find the quantity of milk left in the final solution?
(a) 36.4 liters
(b) 38.4 liters
(c) 40 liters
(d) 41.4 liters
(e) 48.4 liters

Q39. Aakash and Vikash invested $R s(x+2000)$ and $\operatorname{Rs}(x+3000)$ respectively in a partnership. If total profit at the end of the year is Rs 28000 and profit share of Vikash's is Rs 16000, then find the value of $x$ (in Rs)?
(a) 1500
(b) 1000
(c) 2000
(d) 500
(e) 1200


Q40. A boat covers 36 km in downstream in 4 hrs . If the speed of the current is $1 / 3^{\text {rd }}$ of its downstream speed, then find the time taken by boat to cover 78 km upstream?
(a) 30 hours
(b) 26 hours
(c) 28 hours
(d) 24 hours
(e) 32 hours

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

Q41. I. $x^{2}-11 x+28=0$
II. $y^{2}-15 y+56=0$
(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. $x^{2}=144$
II. $y^{2}-22 y+121=0$
(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. $x^{2}-18 x+45=0$
II. $y^{2}+17 y+72=0$
(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. $x^{2}=289$
II. $(y-17)^{2}=0$
(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. $x^{2}+15 x+56=0$
II. $y^{2}+16 y+64=0$
(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 $y$.

Directions (46-50): The line graph given below shows the total number of posts (Photos + Reels) shared by six (P, Q, R, S, T \& U) people in June 2021 on Instagram. Read the data carefully and answer the questions.


Q46. The total post shared by $R$ is what percent less than the total post shared by $S$ ?
(a) $20 \%$
(b) $25 \%$
(c) $15 \%$
(d) $10 \%$
(e) $30 \%$

Q47. In July 2021 total posts shared by $\mathbf{Q}$ \& $\mathbf{U}$ is 12 and 15 more than previous month respectively, then find the total number of the post shared by $Q \& \mathbb{U}$ in July 2021 ?
(a) 95
(b) 91
(c) 93
(d) 97
(e) 99

Q48. Find the average number of posts shared by $P, R \&$ U?
(a) 42
(b) 48
(c) 40
(d) 36
(e) 44

Q49. Total photos shared by $T$ is four more than total reels shared by him, then find total reels shared by $T$ ?
(a) 24
(b) 20
(c) 28
(d) 22
(e) 30

Q50. If the ratio of total photos to total reels shared by $\mathbf{Q}$ is 5 : 9 , then find total photos shared by $\mathbf{Q}$ ?
(a) 10
(b) 18
(c) 12
(d) 14
(e) 16

Directions (51-60): What will come in place of the question mark (?) in the following questions.

Q51.115 $\times 8+$ ? $=20 \%$ of 6000
(a) 280
(b) 180
(c) 200
(d) 300
(e) 380

Q52.11 $\frac{1}{9} \%$ of $873-$ ? $=\sqrt{2116}$
(a) 60
(b) 51
(c) 55
(d) 58
(e) 49

Q53. $2 \frac{4}{7}+4 \frac{1}{3}-3 \frac{2}{3}+\frac{16}{21}=$ ?
(a) 4
(b) 5
(c) 3
(d) 7
(e) 6

Q54. $(14 \times 5) \%$ of $770+110 \times 11=$ ?
(a) 1449
(b) 1749
(c) 1849
(d) 1959
(e) 2039

Q55. $\sqrt[3]{8000} \times 40 \sqrt{400} \div 20+350=$ ?
(a) 1340
(b) 1370
(c) 1266
(d) 1150
(e) 1157

Q56. $520 \%$ of $200+115 \times \frac{2}{5}-246=$ ?
(a) 840
(b) 940
(c) 1040
(d) 1339
(e) 740

Q57. $\sqrt{256 \times 81 \times 4}-160 \times 2.5+400=$ ?
(a) 248
(b) 348
(c) 358
(d) 288
(e) 378

Q58. $30 \div \frac{5}{12}+\sqrt{144} \times 20=$ ?
(a) 118
(b) 156
(c) 208
(d) 256
(e) 312

Q59. $\sqrt{360-225 \times 2+379}=$ ?
(a) 17
(b) 19
(c) 27
(d) 13
(e) 23

Q60.9 ${ }^{3} \times 81^{2} \div 27^{3}=(3)^{?}$
(a) 3
(b) 4
(c) 5
(d) 6
(e) 8

Directions (61-65): What should come in place of the question mark (?) in the following number series.

Q61. 5, 12, 39, 160, ? , 4836
(a) 850
(b) 750
(c) 800
(d) 805
(e) 820

Q62. 8, 27, 64, 125, ?, 343
(a) 216
(b) 222
(c) 210
(d) 207
(e) 225

Q63. 12, 56, 221, 661, ?, 1321
(a) 1320
(b) 1322
(c) 1321
(d) 1323
(e) 1325

Q64. 151, 159, 168, 232, ?, 473
(a) 354
(b) 260
(c) 357
(d) 257
(e) none of these

Q65. 79, 104, 136, 176, 225, ?
(a) 290
(b) 285
(c) 294
(d) 274
(e) 284

## Directions (66-70): Answer the questions based on the following information.

There are ten shelves in a cupboard such that the bottommost shelf is numbered as 1 , just above it is numbered as 2 and so on till the topmost shelf is numbered as 10 . Eight gift boxes are placed in these shelves such that two shelves are vacant. (Note: Two consecutive shelves are not vacant).
There is one box placed below box B. There is two shelves gap between box B and box P which is placed just below the vacant shelf. Box Q is placed above box P at an even numbered shelf but not at the topmost shelf. One box is placed between box Q and box C. Box $S$ is placed just below box A but above $2^{\text {nd }}$ numbered shelf. Box A doesn't place at the topmost shelf. Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$.

Q66. How many boxes are placed between box $A$ and box R?
(a) None
(b) One
(c) Two
(d) Three
(e) Four

Q67. Which of the following box is placed just above box Q?
(a) Box D
(b) Box S
(c) Box R
(d) No box
(e) None of these

Q68. How many boxes are placed below box P?
(a) One
(b) Four
(c) Three
(d) Two
(e) Five

Q69. What will be the sum of the shelf number of box $B$ and box $S$ ?
(a) 6
(b) 7
(c) 5
(d) 4
(e) None of these

Q70. Which of the following shelf is vacant?
(a) Shelf10
(b) Shelf 5
(c) Shelf 8
(d) Shelf 7
(e) Both shelf 7 and 5

Directions (71-74): In each of the questions below, some statements are given followed by two conclusions. You have to take the given statements to be true even if they seem to be at variance with 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: Only a few Crickets are Football. No Football is Hockey. All ground is Cricket.
Conclusions: I. All Cricket can be Hockey.
II. Some Ground are Football.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q72. Statements: Only A is C. Some A are D. All E are G. No G is D
Conclusions: I. No E is D.
II. Some C can be G.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q73. Statements: All Dice are Ludo. All Ludo are Games. No Play are Games.
Conclusions: I. Some Dice can be Play.
II. Some Game are Dice.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q74. Statements: Every Insert are Scroll. At least Scroll are Shift. Only Shift are Delete.
Conclusions: I. Some Scroll being Delete is a possibility.
II. Some Insert are Shift.
(a) If only conclusion I follows.
(b) If only conclusion II follows.
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Q75. How many pairs of letters are there in the word 'ALIGNMENT', each of which have as many letters between them in the word as they have in English alphabetical series (both forward and backward direction)?
(a) One
(b) Three
(c) None
(d) Two
(e) More than three

Directions (76-80): Answer the questions based on the following information.
Nine persons $P, Q, R, S, T, U, V, W$ and $X$ sit around a circular table (but not necessarily in the same order) such that all of them faces towards the table.
(Note: Two consecutive named persons according to alphabetical series didn't sit adjacent to each other).
$W$ sits $3^{\text {rd }}$ to the right of $V$. Two persons sit between $W$ and $R$. One person sits between $V$ and $S$. Number of persons sit between $R$ and $S$ when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of $Q . T$ sits $2^{\text {nd }}$ to the right of $U$.

Q76. Who among the following sits $2^{\text {nd }}$ to the left of $X$ ?
(a) P
(b) $Q$
(c) T
(d) S
(e) U

Q77. How many persons sit between $T$ and $S$ ?
(a) Two
(b) Three
(c) One
(d) Five
(e) Six

Q78. What is the position of $R$ with respect to $W$ ?
(a) $2^{\text {nd }}$ to the right
(b) $2^{\text {nd }}$ to the left
(c) $3^{\text {rd }}$ to the right
(d) Immediate right
(e) Immediate left

Q79. Who are the immediate neighbours of $Q$ ?
(a) X, P
(b) T, U
(c) P, U
(d) U, W
(e) None of these

Q80. If $P$ is related to $X$ in the same way $S$ is related to $Q$, then who among the following is related to $T$ ?
(a) R
(b) W
(c) None of these
(d) V
(e) U

Q81. If in the number "973479542", all the digits are arranged in descending order from left to right, after that 1 is added to all the even digits and 2 is subtracted from all the odd digits, then what will be the sum of the digit which is $4^{\text {th }}$ from the left end and $4^{\text {th }}$ from the right end in the number thus formed after rearrangement?
(a) 10
(b) 12
(c) 9
(d) 8
(e) 11

Directions (82-86): Study the following information carefully and answer the questions given below.
Eight persons have different designations i.e., General Manager (GM), Deputy General Manager (DGM), Assistant General Manager (AGM), Manager, Assistant Manager (AM), Section Officer (SO), Cashier and Clerk in a company. The order of seniority is the same as given above i.e., GM is the senior-most designation and Clerk is the junior-most designation.
Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk.

Q82. Who among the following is Cashier?
(a) Asim
(b) Amar
(c) Amit
(d) Alok
(e) None of these

Q83. How many persons are senior to Asim?
(a) One
(b) Two
(c) Three
(d) Four
(e) More than four

Q84. Four of the following five are like in a certain way and thus forms a group, who among the following doesn't belong to that group?
(a) Ankit -DGM
(b) Amir -Manager
(c) Ajay - Cashier
(d) Amit- Clerk
(e) Alok- AGM

Q85. Which of the following designation is of Amir?
(a) DGM
(b) AGM
(c) Cashier
(d) Clerk
(e) None of these

Q86. How many designations are there between Amar and Alok?
(a) None
(b) One
(c) Two
(d) More than three
(e) Three

Directions (87-89): In each of the questions given below, a group of letters is given which are followed by some combinations of symbols/ numbers (i), (ii), (iii) and (iv). You have to find out which of the combination correctly represents the group of letters based on the symbol/ number codes and the conditions given below. If none of the four combinations represents the group of digits correctly, give 'none of these' as the answer.

| Z | K | U | P | E | A | L | M | S | Q | W | R | I | F | B | J | C |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 9 | 3 | @ | * | 5 | \# | 7 | 8 | $\%$ | 2 | \& | ! | 0 | > | 1 | ? | 4 |

## Conditions:

(i) If the First and last letter is vowel then the code of both letters will be interchanged.
(ii) If the First letter is consonant and last letter is vowel then the code of first letter will be coded as last letter code and the exact middle letter will be coded as first letter code.
(iii) If the first and last letter both are consonant then the code of both letters coded as "= ".
(iv) If the first letter is vowel and the last letter is consonant then both the letters will be coded as last letter code.

Q87. PMAQI
(a) $18 * 20$
(b) $18 \# 20$
(c) $08 * 20$
(d) $08 \# 20$
(e) None of these

Q88. ELZKA
(a) \#7935
(b) \#793\#
(c) 57935
(d) 5793\#
(e) None of these

Q89. USWRF
(a) @\%\&! >
(b) >\%\&! @
(c) >\%\&! >
(d) \&\%\&! \&
(e) None of these

Directions (90-94): Study the following information carefully and answer the questions given below.
Six persons S, A, T, Q, U and B join six different banks viz. SBI, HDFC, ICICI, PNB, Axis and Kotak bank but not necessarily in the same order.
A neither joins SBI nor ICICI. Q joins Kotak bank. U neither joins ICICI nor Axis bank.S and T neither joins ICICI nor HDFC bank. U doesn't join HDFC bank. S and U doesn't join SBI bank.

Q90. Which of the following bank is joined by $B$ ?
(a) PNB
(b) SBI
(c) None of these
(d) ICICI
(e) HDFC

Q91. Who among the following joins Axis bank?
(a) B
(b) Q
(c) T
(d) A
(e) S

Q92. Who among the following joins SBI bank?
(a) B
(b) T
(c) Either B or T
(d) Q
(e) None of these

Q93. Which of the following bank is joined by $A$ ?
(a) HDFC
(b) PNB
(c) Axis
(d) Either HDFC or AXIS
(e) None of these

Q94. Which of the following statement(s) is/are true?
I. A joins HDFC.
II. B doesn't join PNB.
III. T joins Axis.
(a) Only statement I is true
(b) Only Statement III is true
(c) Both statements I and III are true
(d) Both Statements I and II are true
(e) Both statements II and III are true

Directions (95-97): Answer the questions based on the following information.
There are seven members in a family of three-generation and there are two married couples. $B$ is the only daughter of $C$ who is the son-in-law of T.A is the only daughter of F who is maternal grandfather of $R$. A has three children. $M$ is sibling of $R$ and $B$.

## Q95. How is T related to $\mathbf{M}$ ?

(a) Aunt
(b) Mother
(c) Grandmother
(d) Sister
(e) Can't be determined

Q96. How is $M$ related to $\mathbf{C}$ ?
(a) Daughter
(b) Son
(c) Son-in-law
(d) Brother-in-law
(e) Can't be determined

Q97. If $R$ is married to $S$, then how $M$ is related to $S$ ?
(a) Mother-in-law
(b) Sister-in-law
(c) Brother-in-law
(d) Father-in-law
(e) Can't be determined


Directions (98-100): Answer the questions based on the following information.
Six persons i.e., A, B, C, P, Q and R works in a same company earn different monthly salary. The one who gets second highest salary earns Rs 35 k per month. A earns more than $B$ and $Q$ but less than R. P earn less than $B$ and $Q$. The one who earn Rs 10 k less than $A$ is the one who earns second lowest salary. R earns just more than A but not Rs 35k. Neither B nor $C$ earns the second lowest monthly salary. B and Q earn more than C .

Q98. What will be the possible salary of $C$ ?
(a) 26 k
(b) 18 k
(c) 38 k
(d) 45 k
(e) 30 k

Q99. Who among the following earns the $2^{\text {nd }}$ highest salary?
(a) P
(b) A
(c) B
(d) Q
(e) None of these

Q100. Who among the following earns $3^{\text {rd }}$ lowest salary?
(a) B
(b) C
(c) Q
(d) Either B or C
(e) Either B or Q

## Solutions

## S1. Ans.(d)

Sol. To validate the answer, refer to the first paragraph, "This growing concern has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organizing ergonomic sessions, stressing the importance of right sitting posture and regular exercise."

## S2. Ans.(b)

Sol. On referring to second paragraph, we can conclude that only option (b) is true. Refer "When a person sits for long hours, cells in the body muscles do not readily respond to insulin produced by the pancreas. As a result, pancreas produces more insulin which can lead to diabetes."

## S3. Ans. (c)

Sol. To validate the result, refer second paragraph, where it mentions "Muscles in motion trigger the release of mood enhancing hormones by supplying fresh blood and oxygen through the brain. Therefore, when a person sits for long hours the stress level increases."

## S4. Ans.(d)

Sol. Option (a), (b), (c), and (e) do not serve as answers to the question as they do not give a way to treat postural defects. Option (d) can be justified by referencing the line in the third paragraph which say, "When a person complains of postural problems, a confirmation is done by an X-ray or MRI scan. Appropriate exercises are suggested to correct the damage. Patients are also recommended to undergo physiotherapy sessions, if required."

S5. Ans.(e)
Sol. To justify that all three statements are true, refer to the third paragraph of the passage, especially the lines starting from "To avoid health hazards associated with a sedentary lifestyle, make sure you follow these simple exercises. Performing yoga in the morning or evening hours can be beneficial. Take a five-minute stroll for every hour you sit. Instead of..." till the end of the paragraph. Thus, option (e) is correct.

## S6. Ans.(a)

Sol. develop - grow or cause to grow and become more mature, advanced, or elaborate
involve - have or include (something) as a necessary or integral part or result
correct - free from error; in accordance with fact or truth contain - have or hold (someone or something) within relate - make or show a connection between

## S7. Ans.(b)

Sol. enhance - intensify, increase, or further improve the quality, value, or extent of
combine - join or merge to form a single unit or substance intensify - become or make more intense
connect - bring together or into contact so that a real or notional link is established
demolish - comprehensively refute (an argument or its proponent)
dismantle - take (a machine or structure) to pieces

## S8. Ans.(b)

Sol. improve - make or become better
disprove - prove that (something) is false
impair - weaken or damage (something, especially a faculty or function)
ameliorate - make (something bad or unsatisfactory) better revamp - give new and improved form, structure, or appearance to
raise - increase the amount, level, or strength of

## S9. Ans.(d)

Sol. In option (a), "achievement" must be replaced with "achievements" as "one of the" indicates multiple of the entities. Thus, the plural form of the word must be used.
In option (b), "grows" must be replaced with "growing" to maintain the tense of the context, which is present perfect continuous tense. The sentence should follow the syntax:
has/have been + the present participle (root + -ing).
In the statement given by option (c), the preposition "at" cannot be used as it does not relate the number to the quantity. "Of" can fulfil the purpose of the context, and thus should be used in the stead.
Option (d) contains no grammatical or contextual errors, and is thus, the correct answer.

## S10. Ans.(c)

Sol. "It's" is an abbreviation of "it is", while "its" is used for association. In option (a), as association of the stores of weapons with Ukraine is required in the place "it's" is used, it becomes clear that it should be replaced with "its".
In option (b), the minister is a singular subject, and thus "they were" must be replaced with "he was".
For coherency of tense in option (d), which is given in the past tense, "fails" should be replaced with "failed".
Option (c) contains no grammatical or contextual errors, and is thus, the correct answer.

## S11. Ans.(c)

Sol. In option (a), the article "a" makes the quantity singular, so the plural word "husbands" should be replaced with "husband".
In option (b), "thinking" should be replaced by "think". Infinitives are a special form of verbs that can be used as a noun, adjective, or adverb. They are usually made by adding the word to before the base verb i.e., to + V1.
"Extravagantly" is an adverb while "extravagant" is an adjective, the former of which is what the context requires as the word should describe the trinket. Thus, option (d) also has an error.
Option (c) contains no grammatical or contextual errors, and is thus, the correct answer.

## S12. Ans.(e)

Sol. In option (a), the "thing" being used with "many" shows that there is an error in that part of the sentence as they contradict each other with reference to the aspect of quantity. Inference from the context establishes that "thing" has to be changed to "things".
In option (b), "their" should be replaced with "there", as is apparent by the context of the sentence and the definitions of the two words.
their - belonging to or associated with the people or things previously mentioned or easily identified
there - in, at, or to that place or position.
Judging the grammatical and contextual accuracy of option (c), we note the following. "From" acts as an incomplete reference of time as it only defines the beginning of an interval of time, whereas "since" defines the beginning and the end of the interval as the present time. Sell-off of Amazon's shares were compared from the time of 2006 to the present time, and as no concluding time has been given to the interval and is understood to be the present, "since" should be used instead of "from"
In option (d), the interval has been decided and is final in the context of the sentence. Thus, the premise of any continuity in expansion of market for technology products is eliminated. Thus, "has been expanding" should be replaced with "expanded". Note that, the simple past tense shows that you are talking about something that has already happened. Unlike the past continuous tense, which is used to talk about past events that happened over a period, the simple past tense emphasizes that the action is finished.
All sentences are incorrect, and thus, the correct answer becomes option (e).

## S13. Ans.(c)

Sol. In option (a) "raised" must be replaced with "raise". Infinitives are a special form of verbs that can be used as a noun, adjective, or adverb. They are usually made by adding the word to before the base verb i.e., to +V 1 .
"Too" is misspelled as "to" in option (b). The inclusion of "too" is the concerned part of the sentence becomes imminent as the word is used to signify a higher degree of some quality.
In option (d), the preposition "for" should be replaced by "into". coax someone into/out of (doing) something means to gently persuade someone to do something or not do something.
Option (c) contains no grammatical or contextual errors, and is thus, the correct answer.

## S14. Ans.(c)

Sol. The context of the passive sentence indicates that the sentence should follow the syntax of present perfect tense. Therefore, in the present perfect tense we make passive verb forms by putting has/have + been before the past participle form of the verb.

## S15. Ans.(a)

Sol. The sentence is in simple past tense, which eliminates suitability of substitution of all options except option (a), as only option (a) represents simple past tense. Thus, option (a) is the correct answer.

## S16. Ans.(c)

Sol. The definitions given below help understand why option (c) is the only option that fits the context.
degradable - capable of being slowly broken down into simple parts
able - having the power, skill, means, or opportunity to do something
suitable - right or appropriate for a particular person, purpose, or situation
palpable - (of a feeling or atmosphere) so intense as to seem almost tangible
manageable - able to be controlled or dealt with without difficulty

## S17. Ans.(a)

Sol. The definitions given below help understand why option (a) is the only option that fits the context.
publish - prepare and issue (a book, journal, piece of music, etc.) for public sale, distribution, or readership
perish - of rubber, food, etc.) lose its normal qualities; rot or decay
trash - damage or destroy
relish - enjoy greatly
rush - move with urgent haste

## S18. Ans.(d)

Sol. The intention to make the molecules "compost" and "break down" is mentioned in the first paragraph. As the first paragraph acts as an introduction to the theme, and the second paragraph goes into detail of the process discovered, it is only logical that "degrade" can be substituted in the blank. No other word can fulfil the requirements of the context, and the following given definitions help understand why.
degrade - break down or deteriorate chemically
invade - encroach or intrude on
remake (present form of remade) - make (something) again or differently
crusade - a vigorous campaign for political, social, or religious change.
fade - gradually grow faint and disappear

## S19. Ans.(b)

Sol. The context already mentions that sugar molecules are added to the polymer.
Refer to the last line of the first paragraph, which says ". Researchers at the University of Bath discovered that adding sugar units to polymers increases their degradability when exposed to UV radiation." Thus, option (b) becomes the obvious answer.

## S20. Ans.(c)

Sol. The context requires an adverb, and an adverb is only presented by option (c), and it is thus, marked correct.

## S21. Ans.(c)

Sol. After rearrangement according to the order of the marked option, the sentence becomes meaningful, comes out to be, "The JWST provides astronomers with the most powerful tool yet to scan the cosmos in infrared frequencies, picking up the most distant objects."

## S22. Ans.(a)

Sol. After rearrangement according to the order of the marked option, the sentence becomes meaningful, comes out to be, "These days, America's mainstream environmental movement has begun to take a more confrontational approach in its protests and demonstrations."

## S23. Ans.(d)

Sol. After rearrangement according to the order of the marked option, the sentence becomes meaningful, comes out to be, "Currently available vaccines have a higher protective effect against hospitalisation, preventing severe disease, and even death."

## S24. Ans.(b)

Sol. After rearrangement according to the order of the marked option, the sentence becomes meaningful, comes out to be, "It is essential that parents and teenagers take proactive steps now to help plan for and preserve mental well-being during their transition to college."

## S25. Ans.(b)

Sol. After rearrangement according to the order of the marked option, the sentence becomes meaningful, comes out to be, "Ancient philosophers from Aristotle to Siddhartha have long known that the outdoors can be an emotional and mental balm."

## S26. Ans.(c)

Sol. The correct spelling of "eratic" is erratic. All other spellings are correct. Thus, option (c) is correct.
erratic - not even or regular in pattern or movement; unpredictable

## S27. Ans.(b)

Sol. The correct spelling of "sensasion" is sensation. All other spellings are correct. Thus, option (b) is the correct answer. sensation - a widespread reaction of interest and excitement

S28. Ans.(a)
Sol. The correct spelling of "rescent" is recent. All other spellings are correct. Thus, option (a) is the correct answer. recent - having happened, begun, or been done not long ago; belonging to a past period comparatively close to the present

## S29. Ans.(e)

Sol. Spellings of all the given words are correct. Thus, option (e) is the correct answer.

## S30. Ans. (d)

Sol. The correct spelling of "uncertainity" is uncertainty. All other spellings are correct. Thus, option (d) is the correct answer.
uncertainty - the state of being uncertain

## S31. Ans.(e)

Sol.
let actual SP be Rs. x
New selling price $=$ Rs. $\frac{4 x}{5}$
Let CP be Rs. y
ATQ, $\frac{\frac{4 x}{5}-y}{y}=\frac{20}{100}=\frac{1}{5}$
$\frac{4 x}{5}-y=\frac{y}{5}$
$\frac{y}{x}=\frac{2}{3}$
When article sold at actual selling price,
Profit percentage $=\frac{x-y}{y} \times 100=\frac{\frac{3 y}{z}-y}{y} \times 100=50 \%$

## S32. Ans.(a)

Sol.
ATQ, $\frac{x \times 14 \times 3}{100}-\frac{x \times 10 \times 3}{100}=120$
$\frac{(42-30) x}{100}=120$
$x=R s .1000$
Required answer $=5 x=5 \times 1000=R s .5000$

## S33. Ans. (b)

Sol.
1 day wage of 4 men \& 3 children $=\frac{600}{3}=$ Rs. 200
Let efficiency of a man \& a child be M \& C units/day respectively
Equating total work,
$(4 M+3 C) \times 3=M \times 15$
$M: C=3: 1$ (this is also ratio of daily wage)
Daily wage of a man $=\frac{3}{15} \times 200=R s .40$

S34. Ans.(c)
Sol.
Let leak empty it in x hr, then
$\frac{1}{15}-\frac{1}{x}=\frac{1}{18}$
$\frac{1}{x}=\frac{1}{15}-\frac{1}{18}$
$\mathrm{x}=90 \mathrm{hrs}$

## S35. Ans.(c)

Sol.
let the smallest odd number be ' $a$ ' so next odd number be ' $a+2$ ' and so on
$8^{\text {th }}$ number $=a+(8-1) \times 2=a+14$ (using AP, nth term $=a+(n-1) d$ )
ATQ, $\quad \frac{a+a+2+\cdots+a+14}{8}=10$
$8 a+56=80$ (Using sum of AP)
$a=\frac{80-56}{8}=3$
Since ' $a$ ' is smallest number, so smallest 4 numbers will be $=3,5,7,9$
Required average $=\frac{3+5+7+9}{4}=6$

## S36. Ans.(c)

Sol.
Let son's present age $=x$ years
Then, person's present age $=(x+16)$ year
After $2 \mathrm{yrs},(\mathrm{x}+16)+2=2(\mathrm{x}+2)$
$x+18=2 x+4$
$\mathrm{x}=14$ years
Hence, son's age after 8 years $=14+8=22 \mathrm{yrs}$

S37. Ans.(b)
Sol.
Let the length(l) and breadth(b) of the rectangle be 20 x and 10 y respectively.
Area of the rectangle $=1 \times b=20 \mathrm{x} \times 10 y=200 \mathrm{xy}$
When length and breadth of the rectangle is increased by $20 \%$ and $10 \%$ respectively,
then new length and new breadth of rectangle will be 24 x and 11 y respectively
new area of rectangle $=24 \mathrm{x} \times 11 \mathrm{y}=264 \mathrm{xy}$
$\%$ Increase in area of the rectangle $=\frac{264 x y-200 x y}{200 x y} \times 100=32 \%$

## S38. Ans.(b)

Sol.
The container is full of 75 liters milk
Required quantity of milk=75 $\left(1-\frac{15}{75}\right)^{3}$
$=75\left(1-\frac{1}{5}\right)^{3}$ a
$=38.4$ liters

S39. Ans.(b)
Sol.
Ratio in which profit is distributed between Aakash and Vikash $=(x+2000)$ : $(x+3000)$
$\frac{x+2000}{x+3000}=\frac{28000-16000}{16000}$
$\Rightarrow \frac{x+2000}{x+3000}=\frac{3}{4}$
$4 x+8000=3 x+9000$
$\Rightarrow x=R s .1000$

## S40. Ans.(b)

Sol.
Downstream speed $=\frac{36}{4}=9 \mathrm{~km} / \mathrm{hr}$
Speed of the current $=\frac{1}{3} \times 9=3 \mathrm{~km} / \mathrm{hr}$
Speed of the boat $=9-3=6 \mathrm{~km} / \mathrm{hr}$
Now, Uptream speed $=6-3=3 \mathrm{~km} / \mathrm{hr}$
Total time taken $=\frac{78}{3}=26 \mathrm{hr}$

## S41. Ans.(d)

Sol. I. $\mathrm{x}^{2}-11 \mathrm{x}+28=0$
$x^{2}-7 x-4 x+28=0$
$x(x-7)-4(x-7)=0$
$(x-7)(x-4)=0$
$\mathrm{x}=7,4$
II. $y^{2}-15 y+56=0$
$y^{2}-7 y-8 y+56=0$
$y(y-7)-8(y-7)=0$
$(y-7)(y-8)=0$
$y=8,7$
$x \leq y$

## S42. Ans.(e)

Sol.
I. $x^{2}=144$
$x= \pm 12$
II. $y^{2}-22 y+121=0$
$(y-11)^{2}=0$
$y=11$
So, no relation.

## S43. Ans.(a)

Sol.

$$
\begin{aligned}
& \text { I. } x^{2}-18 x+45=0 \\
& x^{2}-15 x-3 x+45=0 \\
& x(x-15)-3(x-15)=0 \\
& x=3,15 \\
& \text { II. } y^{2}+17 y+72=0 \\
& \mathrm{y}^{2}+9 y+8 y+72=0 \\
& y(y+9)+8(y+9)=0 \\
& y=-8,-9 \\
& \text { So, } x>y
\end{aligned}
$$

S44. Ans.(d)
Sol.
I. $x^{2}=289$
$\mathrm{x}=17,-17$
II. $(y-17)^{2}=0$
$y=17$
So, $x \leq y$

## S45. Ans.(b)

## Sol.

I. $x^{2}+8 x+7 x+56=0$
$x(x-8)+7(x-8)=0$
$\mathrm{x}=-8,-7$
II. $y^{2}+16 y+64=0$
$\mathrm{y}^{2}+8 \mathrm{y}+8 \mathrm{y}+64=0$
$y(y+8)+8(y+8)=0$
$y=-8,-8$
So, $x \geq y$

## S46. Ans.(a)

Sol.
Required percentage $=\frac{40-32}{40} \times 100=20 \%$

S47. Ans.(c)
Sol. Required sum $=(28+12)+(38+15)=93$
S48. Ans.(c)
Sol.
Required average $=\frac{50+32+38}{3}=40$

S49. Ans.(b)
Sol.
Let total reels shared by $\mathrm{T}=\mathrm{x}$
So, total photos shared by $T=(x+4)$
ATQ -
$x+x+4=44$
$2 \mathrm{x}=40$
$\mathrm{x}=20$

## S50. Ans.(a)

## Sol.

Total photos shared by $Q=28 \times \frac{5}{14}=10$

## S51. Ans.(a)

Sol.
$?=1200-920$
$?=280$

S52. Ans.(b)
Sol.
$\frac{1}{9} \times 873-46=$ ?
$?=97-46$
$?=51$

## S53. Ans.(a)

Sol.
$?=(2+4-3)+\left(\frac{4}{7}+\frac{1}{3}-\frac{2}{3}+\frac{16}{21}\right)$
$?=3+1$
? $=4$

## S54. Ans.(b)

Sol.
$70 \times \frac{770}{100}+1210=$ ?
$539+1210=$ ?
? $=1749$
S55. Ans.(d)
Sol.
$20 \times 40 \times 20 \times \frac{1}{20}+350=$ ?
$?=1150$

## S56. Ans.(a)

Sol.
$520 \times \frac{200}{100}+46-246=$ ?
$1040+46-246=$ ?
$?=840$

## S57. Ans.(d)

Sol. $16 \times 9 \times 2-400+400=$ ?
? = 288

## S58. Ans.(e)

Sol.
$30 \times \frac{12}{5}+12 \times 20=?$
? $=312$

S59. Ans.(a)
Sol.
$\sqrt{360-450+379}$
$?=\sqrt{289}=17$

## S60. Ans.(c)

Sol.

$$
3^{?}=\left(3^{2}\right)^{3} \times\left(3^{4}\right)^{2}=3^{6} \times 3^{8} \div 3^{9}=3^{5}
$$

Or, ? = 5

S61. Ans.(d)
Sol.
Pattern of series -


Hence, missing term is 805 .

S62. Ans.(a)
Sol.
Pattern of series -


Hence, missing term is 216 .

## S63. Ans.(c)

Sol.
Pattern of series -


Hence, missing term is 1321.

S64. Ans.(d)
Sol.
Pattern of series -


Hence, missing term is 257 .

## S65. Ans.(e)

Sol.
Pattern of series -


Hence, missing term is 284.

## S66. Ans.(c)

Sol. There is one box placed below box B. So, there are two possible cases as there may be a vacant shelf below box B . Also, there is two shelves gap between box $B$ and box $P$ which is placed just below the vacant shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 |  |  |
| 9 |  |  |
| 8 |  |  |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P |  |
| 4 |  |  |
| 3 |  | B |
| 2 | B |  |
| 1 |  |  |

Box $Q$ is placed above box $P$ at an even numbered shelf but not at the topmost shelf. One box is placed between box Q and box C. Box $S$ is placed just below box $A$ but above $2^{\text {nd }}$ numbered shelf.

Box A doesn't place at the topmost shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 |  |  |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 |  |  |

Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$. So, box $R$ should be placed at shelf number 1 as box $Q$ is placed at shelf number 8 so the sum will be 9 in which box D will be placed.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 | R | R |

Now, we know there are two vacant shelves but case 1 will be ruled out as it is given that two consecutive shelves are not vacant. In Case 2, shelf number 2 will be vacant.

| Shelves | Boxes <br> (Gase 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | G | C |
| 9 | P | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B | Vacant |
| 1 | R | R |

Thus, the final arrangement is: -

| Shelves | Boxes |
| :--- | :--- |
| 10 | C |
| 9 | D |
| 8 | Q |
| 7 | Vacant |
| 6 | P |
| 5 | A |
| 4 | S |
| 3 | B |
| 2 | Vacant |
| 1 | R |

Two boxes (box S and box B) are placed between box A and box R.

S67. Ans.(a)
Sol. There is one box placed below box B. So, there are two possible cases as there may be a vacant shelf below box $B$. Also, there is two shelves gap between box $B$ and box $P$ which is placed just below the vacant shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 |  |  |
| 9 |  |  |
| 8 |  |  |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P |  |
| 4 |  |  |
| 3 |  | B |
| 2 | B |  |
| 1 |  |  |

Box Q is placed above box P at an even numbered shelf but not at the topmost shelf. One box is placed between box Q and box C. Box $S$ is placed just below box $A$ but above $2^{\text {nd }}$ numbered shelf.
Box A doesn't place at the topmost shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 |  |  |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 |  |  |

Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$. So, box $R$ should be placed at shelf number 1 as box $Q$ is placed at shelf number 8 so the sum will be 9 in which box $D$ will be placed.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 | R | R |

Now, we know there are two vacant shelves but case 1 will be ruled out as it is given that two consecutive shelves are not vacant. In Case 2 , shelf number 2 will be vacant.

| Shelves | Boxes <br> (Gase 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | G | C |
| 9 | Q | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B | Vacant |
| 1 | R | R |

Thus, the final arrangement is: -

| Shelves | Boxes |
| :--- | :--- |
| 10 | C |
| 9 | D |
| 8 | Q |
| 7 | Vacant |
| 6 | P |
| 5 | A |
| 4 | S |
| 3 | B |
| 2 | Vacant |
| 1 | R |

Box $D$ is laced just above box Q .

S68. Ans.(b)
Sol. There is one box placed below box B. So, there are two possible cases as there may be a vacant shelf below box $B$. Also, there is two shelves gap between box $B$ and box $P$ which is placed just below the vacant shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 |  |  |
| 9 |  |  |
| 8 |  |  |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P |  |
| 4 |  |  |
| 3 |  | B |
| 2 | B |  |
| 1 |  |  |

Box Q is placed above box P at an even numbered shelf but not at the topmost shelf. One box is placed between box Q and box C. Box $S$ is placed just below box $A$ but above $2^{\text {nd }}$ numbered shelf.
Box A doesn't place at the topmost shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 |  |  |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 |  |  |

Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$. So, box $R$ should be placed at shelf number 1 as box $Q$ is placed at shelf number 8 so the sum will be 9 in which box D will be placed.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 | R | R |

Now, we know there are two vacant shelves but case 1 will be ruled out as it is given that two consecutive shelves are not vacant. In Case 2 , shelf number 2 will be vacant.

| Shelves | Boxes <br> (Gase-1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | G | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B | Vacant |
| 1 | R | R |

Thus, the final arrangement is: -

| Shelves | Boxes |
| :--- | :--- |
| 10 | C |
| 9 | D |
| 8 | Q |
| 7 | Vacant |
| 6 | $P$ |
| 5 | A |
| 4 | S |
| 3 | B |
| 2 | Vacant |
| 1 | R |

Four boxes are placed below box P.

## S69. Ans.(b)

Sol. There is one box placed below box B. So, there are two possible cases as there may be a vacant shelf below box B . Also, there is two shelves gap between box $B$ and box $P$ which is placed just below the vacant shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 |  |  |
| 9 |  |  |
| 8 |  |  |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P |  |
| 4 |  |  |
| 3 |  | B |
| 2 | B |  |
| 1 |  |  |

Box $Q$ is placed above box $P$ at an even numbered shelf but not at the topmost shelf. One box is placed between box $Q$ and box C. Box $S$ is placed just below box $A$ but above $2^{\text {nd }}$ numbered shelf.
Box A doesn't place at the topmost shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 |  |  |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 |  |  |

Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$. So, box $R$ should be placed at shelf number 1 as box $Q$ is placed at shelf number 8 so the sum will be 9 in which box $D$ will be placed.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 | R | R |

Now, we know there are two vacant shelves but case 1 will be ruled out as it is given that two consecutive shelves are not vacant. In Case 2, shelf number 2 will be vacant.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | G | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B | Vacant |
| 1 | P | R |

Thus, the final arrangement is: -

| Shelves | Boxes |
| :--- | :--- |
| 10 | C |
| 9 | D |
| 8 | Q |
| 7 | Vacant |
| 6 | P |
| 5 | A |
| 4 | S |
| 3 | B |
| 2 | Vacant |
| 1 | R |

Shelf number of box B is 3 and shelf number of box $S$ is 4 . Thus, the required sum $=3+4=7$.

## S70. Ans.(d)

Sol. There is one box placed below box B. So, there are two possible cases as there may be a vacant shelf below box $B$. Also, there is two shelves gap between box $B$ and box $P$ which is placed just below the vacant shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 |  |  |
| 9 |  |  |
| 8 |  |  |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P |  |
| 4 |  |  |
| 3 |  | B |
| 2 | B |  |
| 1 |  |  |

Box $Q$ is placed above box $P$ at an even numbered shelf but not at the topmost shelf. One box is placed between box $Q$ and box C. Box $S$ is placed just below box $A$ but above $2^{\text {nd }}$ numbered shelf.
Box A doesn't place at the topmost shelf.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 |  |  |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 |  |  |



Sum of the shelf number of box $R$ and box $Q$ is equal to the shelf number of box $D$. So, box $R$ should be placed at shelf number 1 as box $Q$ is placed at shelf number 8 so the sum will be 9 in which box D will be placed.

| Shelves | Boxes <br> (Case 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | C | C |
| 9 | D | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B |  |
| 1 | R | R |

Now, we know there are two vacant shelves but case 1 will be ruled out as it is given that two consecutive shelves are not vacant. In Case 2 , shelf number 2 will be vacant.

| Shelves | Boxes <br> (Gase 1) | Boxes <br> (Case 2) |
| :--- | :--- | :--- |
| 10 | G | C |
| 9 | P | D |
| 8 | Q | Q |
| 7 |  | Vacant |
| 6 | Vacant | P |
| 5 | P | A |
| 4 | A | S |
| 3 | S | B |
| 2 | B | Vacant |
| 1 | R | R |

Thus, the final arrangement is: -

| Shelves | Boxes |
| :--- | :--- |
| 10 | C |
| 9 | D |
| 8 | Q |
| 7 | Vacant |
| 6 | P |
| 5 | A |
| 4 | S |
| 3 | B |
| 2 | Vacant |
| 1 | R |

Shelf 7 is vacant.

S71. Ans.(d)
Sol. I. Not Follows - Because only a few crickets are football and no football is hockey, so the part of football which is cricket can never be hockey.
II. Not Follows - Because there is no direct relation between Football and Ground, thus any definite relation will not follow.


## S72. Ans.(a)

Sol. I. Follows - Because all E is G and no G is D so it is clear that no E is D.
II. Not Follows - Because C is only related to A, so relation of $C$ with any other element will not follow even in possibility.


## S73. Ans.(b)

Sol. I. Not Follows - Because all Dice are Ludo and all Ludo are game, it means all Dice are Games as well, also it is given that no Play are Games so it is clear that no Dice can be play.
II. Follows - Because all Dice are Ludo and all Ludo are Games so it is clear that some Games are Dice.


## S74. Ans.(d)

Sol. I. Not Follows - Because Delete is only related to Shift so the relation of Delete with any other element is not possible.
II. Not Follows - Because there is no direct relation between Insert and Shift, so any definite relation will not follow.


S75. Ans.(b)
Sol. There are three Pairs.

## ALGGNMENT

## S76. Ans.(a)

Sol. W sits 3rd to the right of V. Two persons sit between W and R .


One person sits between $V$ and S . So, S will sit immediate left of W as it is given that two consecutive named persons according to alphabetical order doesn't sit adjacent to each other.


Number of persons sit between R and S when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of Q . Here, one more possibility introduced..


$T$ sits $2^{\text {nd }}$ to the right of $U$. Here, Case 2 is ruled out as there is no place left for $T$ and $U$ according to this condition.



We know, X is one of the persons thus the final arrangement is: -

$P$ sits $2^{\text {nd }}$ to the let of X .

## S77. Ans.(b)

Sol. W sits 3rd to the right of V. Two persons sit between W and R .


One person sits between V and S . So, S will sit immediate left of W as it is given that two consecutive named persons according to alphabetical order doesn't sit adjacent to each other.


Number of persons sit between $R$ and $S$ when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of $Q$. Here, one more possibility introduced..


$T$ sits $2^{\text {nd }}$ to the right of $U$. Here, Case 2 is ruled out as there is no place left for $T$ and $U$ according to this condition.



We know, X is one of the persons thus the final arrangement is: -


Three persons sit between S and T .

## S78. Ans.(c)

Sol. W sits $3^{\text {rd }}$ to the right of V. Two persons sit between W and R .


One person sits between $V$ and $S$. So, $S$ will sit immediate left of W as it is given that two consecutive named persons according to alphabetical order doesn't sit adjacent to each other.


Number of persons sit between $R$ and $S$ when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of Q . Here, one more possibility introduced..


$T$ sits $2^{\text {nd }}$ to the right of $U$. Here, Case 2 is ruled out as there is no place left for $T$ and $U$ according to this condition.



We know, X is one of the persons thus the final arrangement is: -


R sits $3^{\text {rd }}$ to the right of W .

## S79. Ans.(d)

Sol. W sits $3^{\text {rd }}$ to the right of V. Two persons sit between W and R.


One person sits between $V$ and $S$. So, $S$ will sit immediate left of W as it is given that two consecutive named persons according to alphabetical order doesn't sit adjacent to each other.


Number of persons sit between $R$ and $S$ when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of $Q$. Here, one more possibility introduced..


$T$ sits $2^{\text {nd }}$ to the right of $U$. Here, Case 2 is ruled out as there is no place left for T and U according to this condition.



We know, X is one of the persons thus the final arrangement is: -

$U$ and $W$ are the immediate neighbours of $Q$.
S80. Ans.(e)
Sol. W sits $3^{\text {rd }}$ to the right of V. Two persons sit between W and R.


One person sits between $V$ and S . So, S will sit immediate left of W as it is given that two consecutive named persons according to alphabetical order doesn't sit adjacent to each other.


Number of persons sit between $R$ and $S$ when counted from right of $S$ is same as sit between $P$ and $Q$ when counted from right of Q . Here, one more possibility introduced..

$T$ sits $2^{\text {nd }}$ to the right of $U$. Here, Case 2 is ruled out as there is no place left for T and U according to this condition.



We know, X is one of the persons thus the final arrangement is: -

$1^{\text {st }}$ persons in the given question sits $2^{\text {nd }}$ to the left of the $2^{\text {nd }}$ persons, so $U$ is related to $T$.

## S81. Ans.(a)

Sol. Given Number - 973479542
Number formed after arranging in the descending order $=$ 997754432
Number formed after 1 is added to all the even digits and 2 is subtracted from all the odd digits $=775535513$
So, $4^{\text {th }}$ digit from left end -5 and $4^{\text {th }}$ digit from right end -5 Thus, the required sum $=5+5=10$.

## S82. Ans.(c)

Sol. Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. There are two possible cases as Amar may be senior than Ajay or may be junior than Ajay.

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) |
| :--- | :--- | :--- |
| GM |  |  |
| DGM |  | Amar |
| AGM |  |  |
| Manager | Ankur | Ankur |
| AM | Ajay | Ajay |
| SO |  |  |
| Cashier |  |  |
| Clerk | Amar |  |

Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Here, one more possibility comes from case 1 as: -

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit |  |
| DGM | Amir | Amar |  |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit |  |  |
| Cashier |  |  | Amit |
| Clerk | Amar |  | Amar |

Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk. So, Case 1 and Case 2 is ruled out here as there is no place left for them according to this condition.

| Designations | Persens <br> (Gase 1) | Persens <br> f(ase2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit | Ankit |
| DGM | Amir | Amar | Alok |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit | Ankit | Asim |
| Cashier |  | Alok | Amit |
| Clerk | Amar |  | Amar |

Thus, the final arrangement is: -

| Designations | Persons |
| :--- | :--- |
| GM | Ankit |
| DGM | Alok |
| AGM | Amir |
| Manager | Ankur |
| AM | Ajay |
| SO | Asim |
| Cashier | Amit |
| Clerk | Amar |

Amit is the Cashier.


## S83. Ans.(e)

Sol. Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. There are two possible cases as Amar may be senior than Ajay or may be junior than Ajay.

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) |
| :--- | :--- | :--- |
| GM |  |  |
| DGM |  | Amar |
| AGM |  |  |
| Manager | Ankur | Ankur |
| AM | Ajay | Ajay |
| SO |  |  |
| Cashier |  |  |
| Clerk | Amar |  |

Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Here, one more possibility comes from case 1 as: -

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit |  |
| DGM | Amir | Amar |  |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit |  |  |
| Cashier |  |  | Amit |
| Clerk | Amar |  | Amar |

Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk. So, Case 1 and Case 2 is ruled out here as there is no place left for them according to this condition.

| Designations | Persens <br> (Gase 1) | Persens <br> (Case2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit | Ankit |
| DGM | Amir | Amar | Alok |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit | Ankit | Asim |
| Cashier |  | Alok | Amit |
| Clerk | Amar |  | Amar |

Thus, the final arrangement is: -

| Designations | Persons |
| :--- | :--- |
| GM | Ankit |
| DGM | Alok |
| AGM | Amir |
| Manager | Ankur |
| AM | Ajay |
| SO | Asim |
| Cashier | Amit |
| Clerk | Amar |

Five persons are senior to Asim.

## S84. Ans.(c)

Sol. Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. There are two possible cases as Amar may be senior than Ajay or may be junior than Ajay.

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) |
| :--- | :--- | :--- |
| GM |  |  |
| DGM |  | Amar |
| AGM |  |  |
| Manager | Ankur | Ankur |
| AM | Ajay | Ajay |
| SO |  |  |
| Cashier |  |  |
| Clerk | Amar |  |

Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Here, one more possibility comes from case 1 as: -

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit |  |
| DGM | Amir | Amar |  |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit |  | Amit |
| Cashier |  |  | Amar |
| Clerk | Amar |  | Amar |

Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk. So, Case 1 and Case 2 is ruled out here as there is no place left for them according to this condition.

| Designations | Persens <br> (Gase-1) | Persens <br> (Gase2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit | Ankit |
| DGM | Amir | Amar | Alok |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit | Ankit | Asim |
| Cashier |  | Alok | Amit |
| Clerk | Amar |  | Amar |

Thus, the final arrangement is: -

| Designations | Persons |
| :--- | :--- |
| GM | Ankit |
| DGM | Alok |
| AGM | Amir |
| Manager | Ankur |
| AM | Ajay |
| SO | Asim |
| Cashier | Amit |
| Clerk | Amar |

All the persons are given with its just junior designation except Ajay.

S85. Ans.(b)
Sol. Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. There are two possible cases as Amar may be senior than Ajay or may be junior than Ajay.

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) |
| :--- | :--- | :--- |
| GM |  |  |
| DGM |  | Amar |
| AGM |  |  |
| Manager | Ankur | Ankur |
| AM | Ajay | Ajay |
| SO |  |  |
| Cashier |  |  |
| Clerk | Amar |  |

Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Here, one more possibility comes from case 1 as: -

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit |  |
| DGM | Amir | Amar |  |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit |  | Amit |
| Cashier |  |  | Amar |
| Clerk | Amar |  | Amar |

Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk. So, Case 1 and Case 2 is ruled out here as there is no place left for them according to this condition.

| Designations | Persens <br> (Gase-1) | Persens <br> (Gase-2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit | Ankit |
| DGM | Amir | Amar | Alok |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit | Ankit | Asim |
| Cashier |  | Alok | Amit |
| Clerk | Amar |  | Amar |

Thus, the final arrangement is: -

| Designations | Persons |
| :--- | :--- |
| GM | Ankit |
| DGM | Alok |
| AGM | Amir |
| Manager | Ankur |
| AM | Ajay |
| SO | Asim |
| Cashier | Amit |
| Clerk | Amar |

Amir is AGM.

## S86. Ans.(d)

Sol. Three persons are junior than Ajay. There are two designations between Ajay and Amar. Ankur is manager of the company. There are two possible cases as Amar may be senior than Ajay or may be junior than Ajay.

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) |
| :--- | :--- | :--- |
| GM |  |  |
| DGM |  | Amar |
| AGM |  |  |
| Manager | Ankur | Ankur |
| AM | Ajay | Ajay |
| SO |  |  |
| Cashier |  |  |
| Clerk | Amar |  |

Designation gap between Ankur and Amar is equal to the designation gap between Amit and Amir who is senior to Ankur. Here, one more possibility comes from case 1 as: -

| Designations | Persons <br> (Case 1) | Persons <br> (Case 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit |  |
| DGM | Amir | Amar |  |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit |  |  |
| Cashier |  |  | Amit |
| Clerk | Amar |  | Amar |

Alok is just junior than Ankit but not just senior to Asim. Alok is not designated as clerk. So, Case 1 and Case 2 is ruled out here as there is no place left for them according to this condition.

| Designations | Persens <br> (Gase 1) | Persens <br> (Gase 2) | Persons <br> (Case 1a) |
| :--- | :--- | :--- | :--- |
| GM |  | Amir/Amit | Ankit |
| DGM | Amir | Amar | Alok |
| AGM |  | Amir/Amit | Amir |
| Manager | Ankur | Ankur | Ankur |
| AM | Ajay | Ajay | Ajay |
| SO | Amit | Ankit | Asim |
| Cashier |  | Alok | Amit |
| Clerk | Amar |  | Amar |

Thus, the final arrangement is: -

| Designations | Persons |
| :--- | :--- |
| GM | Ankit |
| DGM | Alok |
| AGM | Amir |
| Manager | Ankur |
| AM | Ajay |
| SO | Asim |
| Cashier | Amit |
| Clerk | Amar |

There are five designations between Amar and Alok.

S87. Ans.(c)
Sol. Given letters - PMAQI
Condition (ii) is applied, so $=08^{*} 20$
S88. Ans.(a)
Sol. Given letters - ELZKA
Condition (i) is applied, so = \#7935

## S89. Ans.(c)

Sol. Given letters - USWRF
Condition (iv) is applied, so = >\%\&!>

## S90. Ans.(d)

Sol. Q joins Kotak bank. U neither joins ICICI nor Axis bank. U doesn't join HDFC bank. S and U doesn't join SBI bank. From the information given for $U$, it is clear that $U$ will join PNB bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | SBI |
| A |  |
| T |  |
| Q | Kotak |
| U | PNB |
| B |  |

S and T neither joins ICICI nor HDFC bank. Here, S will join Axis bank because it is given that $S$ does not join SBI, ICICI and HDFC bank. Also, $T$ will join SBI bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A |  |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B |  |

A neither joins SBI nor ICICI. So, A will join HDFC bank and B will join ICICI bank. After applying all the condition, we get the final correct combinations for all persons and their banks:-

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A | HDFC |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B | ICICI |

B joins ICICI bank.

## S91. Ans.(e)

Sol. Q joins Kotak bank. U neither joins ICICI nor Axis bank. U doesn't join HDFC bank. S and U doesn't join SBI bank. From the information given for $U$, it is clear that $U$ will join PNB bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | SBI |
| A |  |
| T |  |
| Q | Kotak |
| U | PNB |
| B |  |

S and T neither joins ICICI nor HDFC bank. Here, S will join Axis bank because it is given that $S$ does not join SBI, ICICI and HDFC bank. Also, T will join SBI bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A |  |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B |  |

A neither joins SBI nor ICICI. So, A will join HDFC bank and B will join ICICI bank. After applying all the condition, we get the final correct combinations for all persons and their banks: -

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A | HDFC |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B | ICICI |

S joins Axis bank.

## S92. Ans.(b)

Sol. Q joins Kotak bank. U neither joins ICICI nor Axis bank. U doesn't join HDFC bank. S and U doesn't join SBI bank. From the information given for $U$, it is clear that $U$ will join PNB bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | SBI |
| A |  |
| T |  |
| Q | Kotak |
| U | PNB |
| B |  |

S and T neither joins ICICI nor HDFC bank. Here, S will join Axis bank because it is given that S does not join SBI, ICICI and HDFC bank. Also, T will join SBI bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A |  |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B |  |

A neither joins SBI nor ICICI. So, A will join HDFC bank and B will join ICICI bank. After applying all the condition, we get the final correct combinations for all persons and their banks: -

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A | HDFC |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B | ICICI |

T joins SBI.

## S93. Ans.(a)

Sol. Q joins Kotak bank. U neither joins ICICI nor Axis bank. U doesn't join HDFC bank. S and U doesn't join SBI bank. From the information given for $U$, it is clear that $U$ will join PNB bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | SBI |
| A |  |
| T |  |
| Q | Kotak |
| U | PNB |
| B |  |

S and T neither joins ICICI nor HDFC bank. Here, S will join Axis bank because it is given that $S$ does not join SBI, ICICI and HDFC bank. Also, T will join SBI bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A |  |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B |  |

A neither joins SBI nor ICICI. So, A will join HDFC bank and B will join ICICI bank. After applying all the condition, we get the final correct combinations for all persons and their banks: -

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A | HDFC |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B | ICICI |

A joins HDFC.

## S94. Ans.(d)

Sol. Q joins Kotak bank. U neither joins ICICI nor Axis bank. U doesn't join HDFC bank. S and U doesn't join SBI bank. From the information given for $U$, it is clear that $U$ will join PNB bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | SBI |
| A |  |
| T |  |
| Q | Kotak |
| U | PNB |
| B |  |

S and T neither joins ICICI nor HDFC bank. Here, S will join Axis bank because it is given that S does not join SBI, ICICI and HDFC bank. Also, T will join SBI bank.

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A |  |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B |  |

A neither joins SBI nor ICICI. So, A will join HDFC bank and B will join ICICI bank. After applying all the condition, we get the final correct combinations for all persons and their banks: -

| Persons | Bank Joins |
| :---: | :---: |
| S | Axis |
| A | HDFC |
| T | SBI |
| Q | Kotak |
| U | PNB |
| B | ICICI |

Both statements I and II are true.

## S95. Ans.(c)

Sol. B is the only daughter of C who is the son-in-law of T. A is the only daughter of $F$ who is maternal grandfather of $R$.


A has three children. $M$ is sibling of $R$ and $B$. So, $M$ and $R$ will be son of $A$ as it is given that $B$ is the only daughter and $A$ will be wife of $C$. Now, $T$ will be wife of $F$ as the family is of threegeneration and has two married couple and after combining all the above diagrams we get the final arrangements as: -

$T$ is grandmother of $M$.

## S96. Ans.(b)

Sol. B is the only daughter of C who is the son-in-law of T. A is the only daughter of $F$ who is maternal grandfather of $R$.

$A$ has three children. $M$ is sibling of $R$ and $B$. So, $M$ and $R$ will be son of $A$ as it is given that $B$ is the only daughter and $A$ will be wife of C. Now, T will be wife of $F$ as the family is of threegeneration and has two married couple and after combining all the above diagrams we get the final arrangements as: -

$M$ is son of $C$.

S97. Ans.(c)
Sol. B is the only daughter of C who is the son-in-law of T. A is the only daughter of $F$ who is maternal grandfather of $R$.


A has three children. $M$ is sibling of $R$ and $B$. So, $M$ and $R$ will be son of $A$ as it is given that $B$ is the only daughter and $A$ will be wife of $C$. Now, $T$ will be wife of $F$ as the family is of threegeneration and has two married couple and after combining all the above diagrams we get the final arrangements as: -

$M$ will be brother-in-law of $S$, if $R$ is married to $S$.


## S98. Ans.(b)

Sol. A earns more than B and Q but less than R. R earn just more than A.

$$
R>A>B / Q>B / Q
$$

The one who gets second highest salary earns Rs 35 k per month. R earns just more than A but not Rs 35k. Neither B nor C earns the second lowest monthly salary. B and Q earn more than C .
$\xrightarrow{\mathrm{R}}>\frac{\mathrm{A}}{(35 \mathrm{k})}>\frac{\mathrm{Q} / \mathrm{B}}{}>\underline{\mathrm{Q} / \mathrm{B}}>\underline{\mathrm{Q} /}>\mathrm{C}$
P earns less than B and Q. The one who earn Rs 10 k less than A is the one who earns second lowest salary. Thus, the final arrangement is: -
$\xrightarrow{\mathrm{R}}>\frac{\mathrm{A}}{(35 \mathrm{k})}>\frac{\mathrm{Q} / \mathrm{B}}{}>\frac{\mathrm{Q} / \mathrm{B}}{(25 \mathrm{k})}>\frac{\mathrm{P}}{\mathrm{C}}$
Possible salary of $C$ is below 25 k . So, we have only one option and i.e., 18k.

## S99. Ans. (b)

Sol. A earns more than B and Q but less than R. R earn just more than A.

$$
\mathrm{R}>\mathrm{A}>\mathrm{B} / \mathrm{Q}>\mathrm{B} / \mathrm{Q}
$$

The one who gets second highest salary earns Rs 35 k per month. R earns just more than A but not Rs 35k. Neither B nor C earns the second lowest monthly salary. B and Q earn more than C .
$\xrightarrow{\mathrm{R}}>\frac{\mathrm{A}}{(35 \mathrm{k})}>\xrightarrow{\mathrm{Q} / \mathrm{B}}>\frac{\mathrm{Q} / \mathrm{B}}{}>\frac{\mathrm{Q} /}{}>\frac{\mathrm{C}}{}$
P earns less than B and Q. The one who earn Rs 10 k less than A is the one who earns second lowest salary. Thus, the final arrangement is: -

$$
\xrightarrow{R}>\frac{A}{(35 k)}>\frac{Q / B}{Q}>\frac{Q / B}{(25 k)}>\frac{\mathrm{C}}{( }
$$

A earns the $2^{\text {nd }}$ highest salary.

S100. Ans.(e)
Sol. A earns more than B and Q but less than R. R earn just more than A.
$\mathbf{R}>\mathbf{A}>\mathrm{B} / \mathrm{Q}>\mathrm{B} / \mathrm{Q}$
The one who gets second highest salary earns Rs 35 k per month. R earns just more than A but not Rs 35k. Neither B nor C earns the second lowest monthly salary. B and Q earn more than C .
$\xrightarrow{\mathrm{R}}>\frac{\mathrm{A}}{(35 \mathrm{k})}>\frac{\mathrm{Q} / \mathrm{B}}{\mathrm{Q} / \mathrm{B}}>\underline{\mathrm{Q} /}>\mathrm{C}$
P earns less than B and Q. The one who earn Rs 10 k less than $A$ is the one who earns second lowest salary. Thus, the final arrangement is: -


Either B or Q earns the $3^{\text {rd }}$ lowest salary.


