SBI PO Prelims Previous Year Paper 2022 Mock 6

Directions (1-9) : Read the given passage carefully and answer the following questions. Certain parts have been highlighted to help answer the questions.

Self- help groups (SHGs) play vital role in poverty eradication in Indian villages. A growing number of poor women in different areas of India are members of Self Help Groups and they actively occupy in savings and credit, as well as activities like income creation, natural resources management etc. The savings and credit hub in the SHG is the key component and offers ability to create some control over capital and other investments. The SHG scheme has proven to be very successful for women empowerment and offering to break slowly away from exploitation and **isolation**.

NABARD defines SHGs as "small, economically homogenous affinity groups of rural poor, voluntarily formed to save and mutually contribute to a common fund to be lent to its members as per the group members' decision". A self-help group is a village-based financial intermediary usually **composed** of 10–20 local women. Members make small regular savings aid over a few months until there is enough capital in the group to begin lending. Funds may then be lent back to the members or to others in the village for any reason. The Self Help Groups (SHGs) have become **extensive**, successful component of both rural and urban development in India. Women band together in to groups and motivate each other to build new opportunities for income generation. Most of the SHGs start without any outside financial capital by saving regular charity by the members. These offerings can be very small. After a period of regular savings the SHGs start to give loans from savings in the form of small in-house loans for micro enterprise activities and spending. Only those SHGs that have utilized their own funds well are assisted with external funds through linkages with banks and other financial mediators.

Q1. What is/are the key functioning of self-help groups?
(a) SHGs provide financial security to women and manage natural resources.
(b) Self-Help groups contribute significantly to income creation activities in rural areas.
(c) They help in maintaining moral values in rural areas and work for old age welfare.
(d) Both (a) and (b)
(e) Both (c) and (b)

Q2. How have women benefited from self-help groups?
(a) Women get financial assistance from SHGs during their first gestation period.
(b) SHGs have established many separate medical clinics for women across the village.
(c) SHG supports and promotes women's empowerment along with ending immoral practices
(d) Women have worked towards encouraging girls' education and skill development.
(e) None of these

Q3. What is/are the purpose(s) of the savings made by SHGs members?
(a) Accumulated fund is further donated to the village social welfare fund
(b) SHG lend saved funds back to any needy member or any external person
(c) These funds are directly transferred to the government and in turn, received returns.
(d) SHG members lend funds to banks to earn higher interest rates on these savings
(e) None of these

Q4. What is the criterion to get external funding for Self-help groups?
(a) SHG should be working for more than five years.
(b) Group should comply with all government conditions.
(c) Group's own resources should be used efficiently.
(d) SHG shouldn't be charged with any court case.
(e) None of these
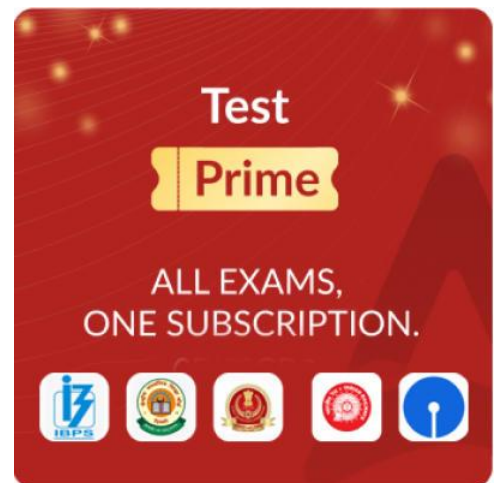
Q5. Which of the following statements is not coherent with NABARD's definition of SHG?
(a) The collected fund is used to accomplish a common goal of its members.
(b) Self-help groups are small groups that are economically similar.
(c) Only members of SHGs decides whom to lend the collected fund.
(d) SHGs consist of a coordinated group of rural people who work voluntarily.
(e) None of these

Q6. Which of the following word is an antonym of '**extensive**' given in the passage?
(a) acquit
(b) compact
(c) instigate
(d) assent
(e) None of these

Q7. Which of the following statements is/are incorrect as per the information given in the passage?
(i) SHGs mainly have 10-20 poor women residing in local areas.
(ii) SHGs have been crucial for poverty eradication in Indian rural areas.
(iii) Only rural areas have benefitted from self-help groups so far.
(a) Only (ii)
(b) Only (iii)
(c) Both (i) and (ii)
(d) Both (ii) and (iii)
(e) Only (i)

Q8. Which of the following word is a synonym of '**isolation**' given in the passage?
(a) exhume
(b) cognizant
(c) segregation
(d) inception
(e) None of these

Q9. Which of the following word is an antonym of '**composed**' given in the passage?
(a) agitated
(b) calmed
(c) collected
(d) centred
(e) None of these

Q10. In the following questions, few sentences are given. Choose and mark the sentence which contains grammatical or contextual error in it. If all the sentences are grammatically and contextually correct, mark the "all are correct" option as the answer choice.
(a) Elections to the Jharkhand Assembly will be held in five phases from November 30 to December 20.
(b) The study found that States that were relatively better developed than the rest of the country were also host to more migrants.
(c) Sarah downloaded a new productivity application on her smartphone to help her manage her tasks and schedule more efficiently
(d) I don't see LTC making any meaningful pull in until the hash rate begins to climb again.
(e) all are correct

Q11. In the following questions, few sentences are given. Choose and mark the sentence which contains grammatical or contextual error in it. If all the sentences are grammatically and contextually correct, mark the "all are correct" option as the answer choice.

(a) In a short while, Attukal and other main festival areas were engulfed in smoke rising from the cooking pots.

(b) Adequate security forces would be deployed in the State, which has 19 districts affected by Left-Wing Extremism.

(c) Punishments are meant to infuse fear in the person who commits a crime with the expectation that it will act as a deterrent.

(d) All are correct

(e) Smartphones have operating systems (OS) that are much like the desktops and laptops we use.

Q12. In the following questions, few sentences are given. Choose and mark the sentence which contains grammatical or contextual error in it. If all the sentences are grammatically and contextually correct, mark the "all are correct" option as the answer choice.

(a) The Congress has questioned the need for a five-phase election.

(b) Rooting an Android phone enables one to get privileged user (root) access, thus allowing the spyware to monitor various activities.

(c) Kids are pure, they are naïve, they are learning and the one thing they have in them is honestness.

(d) In his 2005 bestselling novel "Bounce", Matthew Syed talks about the power of practice and sacrifice that yields high performance.

(e) all are correct

Q13. In the following questions, few sentences are given. Choose and mark the sentence which contains grammatical or contextual error in it. If all the sentences are grammatically and contextually correct, mark the "all are correct" option as the answer choice.

(a) He said that scrapping the project because of locals' opposition to the plan was one of the first demands put forward by the party president.

(b) As a company, NSO has offered services to various clients, and helped them hack a victim's phone through a variety of methods.

(c) We have been given permission to have a demonstration, but they have stated that they will not allow the long march.

(d) Age is a just number to 75-year-old winger Isao Tsulabayashi, who is a member of Tokyo Buwaku Rugby Club.

(e) all are correct

Q14. In the following questions, few sentences are given. Choose and mark the sentence which contains grammatical or contextual error in it. If all the sentences are grammatically and contextually correct, mark the "all are correct" option as the answer choice.

(a) Supernatural star Jared Padalecki is speaking out for the first time for his Oct. 27 arrest in Austin, Texas.

(b) The plea seeking reallocation of the land was rejected by a Division Bench of the court.

(c) The lawyer questioned the statistics in the report and said the calculations were flawed.

(d) U.S. aircraft manufacturer Lockheed Martin unveiled an F-21 fighter, an upgraded variant of the F-16 fighter jet.

(e) all are correct

Directions (15-16) : 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.

Q15. Eradicate

(i) Vaccination has the potential to save lives and **eradicate** the disease.

(ii) Poverty can be **eradicated** by providing universal access to basic social services.

(iii) Floods are a recurrent problem in the Koshi river basins that are **eradicated** by India and Nepal.

(a) None of these

(b) Both (ii) & (iii)

(c) Only (ii)

(d) All of these

(e) Both (i) & (ii)

Q16. Pursue

(i) New guidelines will allow students to **pursue** two degrees simultaneously.

(ii) National awards are usually **pursued** out of private endowments.

(iii) Scientists should **pursue** research in the emerging energy sector to ensure a sustainable future.

(a) None of these

(b) Both (i) & (iii)

(c) Only (ii)

(d) All of these

(e) Both (i) & (ii)

Directions (17-23) : In the following passage, some of the words have been given in bold, each of which is indicated by a number. Find the suitable replacement from the options given against each number to make the paragraph meaningful. If the given bold word is already correct and needs no replacement then choose option (E) i.e. "No replacement required" as your answer.

Q17. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.

(a) relegated

(b) facilely

(c) uninterrupted

(d) impeded

(e) No replacement required

Q18. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.

(a) rally

(b) expansion

(c) oppression

(d) cajole

(e) No replacement required

Q19. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.

(a) stressing
(b) freighting
(c) dampening
(d) veneering
(e) No replacement required

Q20. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.
(a) grapple
(b) disarray
(c) turmoil
(d) complain
(e) No replacement required

Q21. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.
(a) suggestion
(b) confirmation
(c) opinion
(d) conference
(e) No replacement required

Q22. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.
(a) Mediocre
(b) Rotten
(c) Appropriate
(d) Nascent
(e) No replacement required

Q23. Researchers have proved that long hours of **repulsive** (17) sitting can lead to a number of health complications. This growing **concern** (18) has pushed many corporate offices to opt for a standing work desk or make changes to the employee working schedule by organising ergonomic sessions, **embracing** (19) the importance of right sitting posture and regular exercise. Sitting for more than eight hours can lead to postural problems like disc damage, and strained neck in the long run. Many corporate employees who work in sitting position for long hours **combat** (20) of these postural problems. Sitting in upright position without crouching forward and taking a five minute stroll every hour can minimise the risk. Long hours of sitting can lead to imbalances in spinal structure including disc damage, inflexible spine. When a person complains of postural problems, a /an **reckoning** (21) is done by an X-ray or MRI scan. **Edifice** (22) exercises are suggested to correct the damage. Patients are also recommended to **engulf** (23) physiotherapy sessions, if required.
(a) undergo
(b) contemplate
(c) strive
(d) assess
(e) No replacement required

Directions (24-26) : **In each of the questions four 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 interchange with 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**.

Q24. UNESCO is **professional (A)** to **assist (B)** in carrying out a **ready (C)** potentiality **analysis (D)** .
(a) Only (A) -(C)
(b) Only (B) -(C) and (A) -(D)
(c) Only (A) -(B) and (C) -(D)
(d) Only (A) -(D)
(e) None of these

Q25. Burning of crop **layer (A)** causes **present (B)** to other micro-organisms **damage (C)** in the upper **residue (D)** of the soil.
(a) Only (A) -(D)
(b) Only (B) -(A) and (C) -(D)
(c) Only (A) -(D) and (B) -(C)
(d) Only (A) -(B)
(e) None of these

Q26. For most of human **history (A)** the **humans (B)** view has been that **animals (C)** are there for **dominant (D)** to do with as they see fit.
(a) Only (A) -(D) and (C) -(B)
(b) Only (B) -(D)
(c) Only (A) -(C) and (B) -(D)
(d) Only (A) -(D)
(e) None of these

Directions (27-30) : In the following question, sentences are given with a part in bold. **The given phrase in the bold may or may not contain an error. The options following can replace the incorrect phrase. The correct phrase that is to be replaced will be your answer. If the sentence is correct then select 'No replacement required' as your answer**.

Q27. Whenever **it is raining,** waterlogging in streets and roads is the most common problem the city faces.
(a) it is rains
(b) it is rained
(c) it rain
(d) it rains
(e) No replacement required

Q28. Each of the **family member is** invited for the dinner today.
(a) family member are
(b) family members is
(c) family members
(d) families' members are
(e) No replacement required

Q29. Don't let people's criticism **to get to your** heart.
(a) to got to your
(b) to get to your's
(c) to get in your
(d) get to your
(e) No replacement required

Q30. Remote work **has remained a** popular model among employees.
(a) has been remain
(b) have been remained
(c) have remain
(d) had been remaining
(e) No replacement required

Q31. There are x red balls, x-2 green balls and x+2 blue balls in a bag. Probability of drawing 2 red ball is 1/12. Find total number of balls in the bag?
(a) 9
(b) 10
(c) 11
(d) 12
(e) 13

Q32. Veer and Anurag invested Rs. 'x' and Rs. 'x+ 300' for 2 years respectively. Veer invested his money on simple interest at the rate of 10% per annum while Anurag invested his money on compound interest at $12\frac{1}{2}\%$ per annum compounding annually. If Anurag got Rs. 480 more than Veer as the interest, then find the amount invested by Anurag?
(a) Rs 6500
(b) Rs 6600
(c) Rs 6400
(d) Rs 6800
(e) Rs 7000

Q33. A boat travels 240 km upstream and 240 km downstream in 5 hours. If the ratio of speed of boat in still water to stream is 5:3. Find how much time taken by a boat to travel 640 km along the stream. (In hours)
(a) 8
(b) 1
(c) 2
(d) 1⅓
(e) 2⅔

Q34. A vessel contains mixture of alcohol and water in the ratio of 9 : x respectively. When 500 ml mixture taken out from the vessel and mixed in another vessel which contains 100 ml water, then the ratio of alcohol to water becomes 3: 7. Find the value of x?

(a) 16
(b) 15
(c) 14
(d) 17
(e) 20

Q35. A 350 meters long train 'A' passed a pole in 17.5 sec and passed another train 'B' running in the direction opposite to 'A' in 15.4 sec. If length of train 'B' is 420 meters, then in what time train 'A' will pass train 'B' when they both runs in same direction?
(a) 72 seconds
(b) 70 seconds
(c) 77 seconds
(d) 68 seconds
(e) 65 seconds

Q36. If the ratio of length to breadth of a rectangle wall is 2:1 and perimeter of the wall is 348 meters, then find how many approximately bricks of the size 4m×3m are required for covering the wall?
(a) 160
(b) 388
(c) 280
(d) 561
(e) none of these

Q37. Deepak and Shivam together can complete a work in 'T' days while the efficiency of Deepak and Shivam is in the ratio of 5:6 respectively. If Deepak alone started the same work and after 11 days Shivam joins Deepak and both together completed the remaining work in 31 days, then find 'T'?
(a) 28
(b) 32
(c) 36
(d) 38
(e) 24

Q38. Cost price of article A is 80% of that of article B. Article A is marked 60% above its cost price and 20% discount is allowed on it. If discount allowed on article A is Rs.20 more than profit earned on article A, then find cost price of article – B.
(a) Rs.600
(b) Rs.650
(c) Rs.675
(d) Rs.575
(e) Rs.625

Q39. A and B invest in a business in respective ratio of 10: 7. After T months, B invest 40% more while A withdraws 50%. If at the end of the year, the respective ratio of profit share of A and B is 95: 98, then find the value of T.
(a) 4
(b) 5
(c) 6
(d) 7
(e) 8

Directions (40-45) : What approximate value should come in the palace of question (?) mark in given questions.

Q40. $(15.02 \times 12) \div 11.99 + 24.78^2 = ?$
(a) 648
(b) 640
(c) 621
(d) 676
(e) 690

Q41. $109.09 + 511.98 \div 15.97 - ?^2 = (20.99)^2 - (19.96)^2$
(a) 8
(b) 14
(c) 10
(d) 12
(e) 16

Q42. $20.09 \% \text{ of } ? + 70.03 \% \text{ of } 699.92 = \sqrt{676.09} \div 12.97 + 499.99$
(a) 85
(b) 60
(c) 70
(d) 75
(e) 45

Q43. $\sqrt[3]{2196.903} \div \sqrt{1520.960} \times 3.102 + ? = 143.991$
(a) 143
(b) 101
(c) 169
(d) 124
(e) 134

Q44. $31.9 \times 55.011 - ? = (12.01)^3 + 7.94 \% \text{ of } 250.14$
(a) 8
(b) 33
(c) 17
(d) 21
(e) 12

Q45. $\dfrac{?}{80.95} + 23.97\% \text{ of } 325.09 + 55.96 \div 7.93 = 88.06$
(a) 122
(b) 324
(c) 162
(d) 243
(e) 196

Directions (46-50) : Read the following pie charts carefully and answer the questions given below.
Given the pie chart (I) shows the total numbers of shoes (Sports and Sneakers) sold by five different shops in 2020. Given pie chart (II) shows the total numbers of Sneakers shoes sold by five different shops in 2020.

Total number of shoes = 8000

A ■ B ■ C ■ D ■ E

18% 20% 12% 15% 35%

Total number of Sneakers shoes = 4400

A ■ B ■ C ■ D ■ E

15% 15% 10% 20% 40%

Q46. Total number of Sports shoes sold by shop C and E together is approximately what % more than total number of Sneakers shoes sold by shop B and D together?
(a) 21%
(b) 38%
(c) 54%
(d) 47%
(e) 14%

Q47. Find the ratio of total number of Sneakers shoes sold by shop A to total number of Sports shoes sold by shop D?
(a) 13:11
(b) 11:13
(c) 33:26
(d) 26:33
(e) None of these

Q48. What is the average number of sports shoes sold by shop A and B together?
(a) 630
(b) 260
(c) 425
(d) 580
(e) 715

Q49. Find the difference between total number of Sneakers shoes sold by shop C and E together and total number of Sports shoes sold by shop C and D together.
(a) 619
(b) 1015
(c) 860
(d) 720
(e) 1240

Q50. If the total number of shoes increased by 20% in 2021 in shop A and total number of Sneakers shoes increased by 15% in 2021 in shop A, then find the total number of Sport shoes in shop A in 2021.
(a) 1329
(b) 1457
(c) 833
(d) 1532
(e) 1161

Directions (51-55) : Read the following information carefully and answer the questions given below.
There are three departments (H.R., Sales & Finance) in company Z. The ratio of male to female in H.R. is 7:10. Number of females in Finance is 20% more than number of females in H.R. Number of male in Finance is six more than that of female in Finance. Average number of males in all the department is 39 and number of males in sales is 35. Number of females in sales is 25% more no. of female in Finance.

Q51. Number of male and female in marketing department is 40% and 20% more than number of male & female in sales department respectively. Find the total number of employees in marketing department.
(a) 129
(b) 101
(c) 114
(d) 121
(e) 141

Q52. Find the ratio of number of males in H.R. department to number of females in Finance department.
(a) 7:15
(b) 5:12
(c) 2:11
(d) 7:17
(e) 7:12

Q53. Find the average number of females in all the department.
(a) 45 ⅓
(b) 47 ⅓
(c) 41 ⅓
(d) 49 ⅓
(e) 46 ⅓
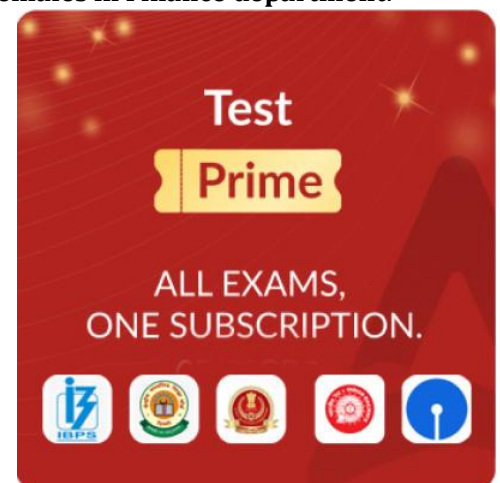
Q54. Number of female in Sales department is what percent more/less than number of females in H.R. department?
(a) 50%
(b) 55%
(c) 75%
(d) 25%
(e) 45%

Q55. Find the difference between total number of males to that of total number of females in company Z.
(a) 36
(b) 31
(c) 22
(d) 27
(e) 18

Directions (56-60) : Study the line chart and table given below and answer the following questions.

Line chart shows the number of chairs manufactured by 4 different chair manufacturers (A, B, C & D) in 2016 & 2017 and table shows the number of chairs sold by these manufacturers in 2016 & 2017.
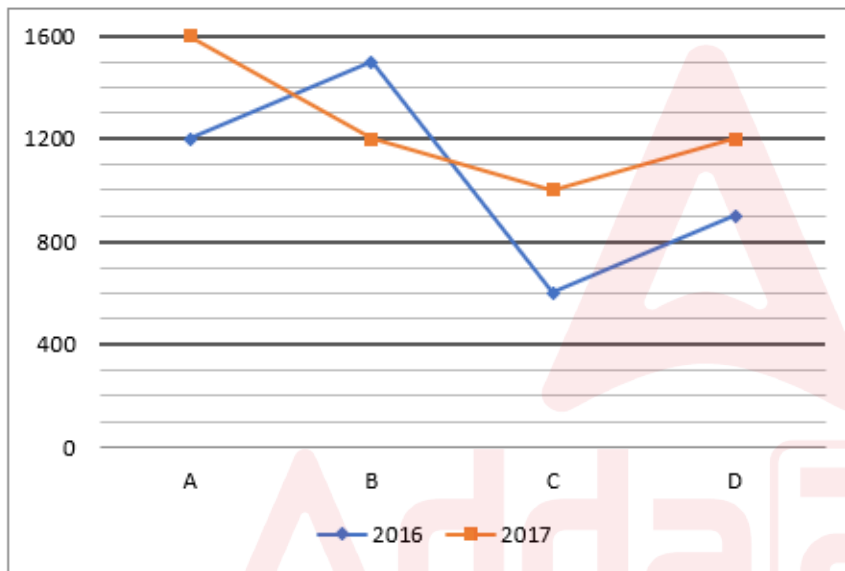
	Chairs sold	
Manufacturer	2016	2017
A	840	1440
B	900	1080
C	570	900
D	810	720

Note – Total chairs manufactured by any manufacturer in any year = Total chairs (sold + unsold) of that manufacturer in that year.

Q56. Unsold chairs of A & D together in 2016 are what percent of sold chairs of B & D together in 2017?
(a) 75%
(b) 40%
(c) 25%
(d) 55%
(e) 60%

Q57. If manufacturing cost of a chair for D in 2016 & 2017 is Rs.200 and selling price of a chair for D in 2016 & 2017 is Rs.250 and Rs.400 respectively, then find profit% is maximum in which year among 2016 & 2017 for D? **(D destroyed all the unsold chairs in these 2 years)**
(a) Maximum in 2017
(b) Maximum in 2016
(c) Equal in 2016 & 2017
(d) None of these
(e) Cannot be determined

Q58. Find ratio of chairs manufactured by A & C together in 2016 to chairs sold by C & D together in 2017.
(a) 7 : 5
(b) 11 : 5
(c) 12 : 7
(d) 10 : 9
(e) 5 : 3

Q59. If chairs manufactured by A in 2018 are 50% more than chairs sold by B in 2016 and ratio of sold to unsold chairs of A in 2018 is 2 : 1, then find average of chairs sold by A in 2016, 2017 & 2018.
(a) 1150
(b) 1060
(c) 1200
(d) 1170
(e) 1030

Q60. Find average number of chairs sold by A, B, C & D in 2016 is how much more or less than total unsold chairs of A, B, C & D together in 2017?
(a) 80
(b) 160
(c) 350
(d) 190
(e) 270

Directions (61-65) : In each of these questions, two equations (I) and (II) are given. You have to solve both the equations and give answer.

Q61.
I. $2x^2 - 13x + 20 = 0$
II. $y^2 + 10y + 24 = 0$

(a) If x> y
(b) If x≥ y
(c) If x< y
(d) If x≤ y
(e) If x = y or no relation can be established between x and y.

Q62.
I. $x^2 - 9x + 18 = 0$
II. $2y^2 - 9y + 9 = 0$

(a) If x> y
(b) If x≥ y
(c) If x< y
(d) If x≤ y
(e) If x = y or no relation can be established between x and y.

Q63.

I. $x^2 - 17x + 70 = 0$

II. $y^2 - 14y + 48 = 0$

(a) If x> y

(b) If x≥ y

(c) If x< y

(d) If x≤ y

(e) If x = y or no relation can be established between x and y.

Q64.

I. $4x^2 + 3x - 10 = 0$

II. $y^2 + 10y - 119 = 0$

(a) If x> y

(b) If x≥ y

(c) If x< y

(d) If x≤ y

(e) If x = y or no relation can be established between x and y.

Q65.

I. $x^2 - 11x + 28 = 0$

II. $y^2 + 13y + 30 = 0$

(a) If x> y

(b) If x≥ y

(c) If x< y

(d) If x≤ y

(e) If x = y or no relation can be established between x and y.

Q66. How many pairs of letters are there in the word 'EXTINGUISH', each of which has as many letters between them as in the English alphabetical series (both forward and backward direction) ?

(a) One

(b) Three

(c) None

(d) Two

(e) More than three

Directions (67-71) : Study the following information carefully and answer the questions given below.

Eight persons sit in a row such that some of them face towards the north direction and some of them face towards the south direction. Not more than two adjacent persons face the same direction. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. Four persons sit between K and G and both of them face the same direction. R sits 2nd to the right of J. W sits 3rd to the right of G. R and P face in the same direction. R and W don't sit adjacent to each other.

Q67. How many persons sit between P and E?

(a) Three

(b) One

(c) None

(d) Two

(e) None of these

Q68. Who sits 2ⁿᵈ to the right of R?
(a) W
(b) E
(c) P
(d) J
(e) None of these

Q69. Four of the following five are alike in a certain way and form a group, then who among the following doesn't belong to that group?
(a) R
(b) K
(c) E
(d) G
(e) P

Q70. What is the position of R with respect to P?
(a) 2ⁿᵈ to the left
(b) 3ʳᵈ to the right
(c) Immediate right
(d) Immediate left
(e) Can't be determined

Q71. How many persons face south direction?
(a) Three
(b) Five
(c) Four
(d) Two
(e) None of these

Directions (72-76) : In each of the questions some statements are given below 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.

Q72. Statements:
Only a few U is K
No K is I
Each I is R.
Conclusions:
I. Some R is not K
II. All U can be I
(a) If only conclusion I follow
(b) If only conclusion II follow
(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 Soo is Hoo
All Hoo is Koo
A few Koo is Loo

Conclusions:
I. Some Loo can be Hoo
II. Some Soo is not Loo
(a) If only conclusion I follow
(b) If only conclusion II follow
(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:
Some Singer are Raper.
Only a few Raper is Dancer.
All Dancer are Artist
Conclusions:
I. Some singer is not Artist
II. All dancer is Singer
(a) If only conclusion I follow
(b) If only conclusion II follow
(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. Statements:
Only Train is Tata
83.5% Train is Toyota
None Toyota is Tokyo
Conclusions:
I. No Tata is Tokyo
II. Some Train is not Tokyo
(a) If only conclusion I follow
(b) If only conclusion II follow
(c) If either conclusion I or II follows
(d) If neither conclusion I nor II follows
(e) If both conclusions I and II follow

Q76. Statements:
Some Style is Font
No size is Style
0% Font is Edit
Conclusions:
I. Some Style can be Edit
II. No Edit is Size
(a) If only conclusion I follow
(b) If only conclusion II follow
(c) If either conclusion I or II follows.
(d) If neither conclusion I nor II follows.
(e) If both conclusions I and II follow.

Directions (77-81) : Study the following information carefully to answer the questions given below.
Seven persons i.e., A, B, C, D, E, F and G go to the stadium to watch a puppet show in different months i.e., January, March, April, June, August, September and December of the same year. Each person belongs to different cities i.e., Meerut, Agra, Manali, Shimla, Jaipur, Indore and Mathura. All the information is not necessarily in the same order.

The one who belongs to Jaipur goes three persons before F. F goes after June. D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having an odd number of days. The number of persons who go before D is same as the number of persons who go after E. B goes just before the one who belongs to Mathura. More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Q77. Who among the following persons belongs to Shimla?
(a) A
(b) B
(c) C
(d) F
(e) D

Q78. How many persons go between B and the one who belongs to Indore?
(a) Two
(b) Four
(c) Three
(d) Five
(e) One

Q79. If all the persons go according to alphabetical order starting from January, then the position of how many persons remains unchanged (the position of cities remains the same) ?
(a) None
(b) One
(c) Two
(d) Three
(e) More than three

Q80. Which among the following statement(s) is/are true?
(a) B goes in the month of January
(b) A goes before F
(c) E goes to Meerut
(d) No one goes after F
(e) All are true

Q81. Which among the following combinations is correctly matched?
(a) D-June
(b) G- Mathura
(c) A-April
(d) E-Manali
(e) B-Indore

Q82. If in the given number "8367542741" 1 is added to the digits at an even position and 1 is subtracted from the digits at an odd position when counted from the left, then what will be the sum of 2nd, 4th, 7th and 9th digits (from the left end) of the number so formed?
(a) 18
(b) 20
(c) 16
(d) 19
(e) None of the above

Directions (83-87) : In each of the following questions assuming the given statements to be true, find which of the two conclusions I and II given below is/are definitely true and give your answer accordingly.

Q83. Statements:
T > L ≤ U = P > B ≤ A
Conclusions:
I. U > A
II. P ≤ A
(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

Q84. Statements:
O ≥ B = X < Q ≤ P < F > L ≥ Z
Conclusions:
I. F > B
II. X < L
(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

Q85. Statements:
P > M ≥ I < Z; S ≤ I = K > W
Conclusions:
I. S ≤ M
II. Z > W
(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

Q86. Statements:
W < M = J ≤ A < X; Z > Q ≥ J ≤ V
Conclusions:
I. Q ≥ W
II. X > V
(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

Q87. Statements:
G > B ≤ P = X ≥ T < A ≤ H = J
Conclusions:
I. X ≥ B
II. T < J

(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

Q88. If we form a four-letter meaningful word with the 1st, 3rd, 6th, and 8th letters from the left end of the word "ROOMMATE" (using one letter once) , then what would be the third letter of that meaningful word? If no meaningful word is formed, then mark the answer as X. If more than one meaningful word is formed then, mark the answer as Z.

(a) R

(b) A

(c) E

(d) X

(e) Z

Directions (89-91) : Study the following information carefully and answer the questions given below.

A person starts walking from point F towards the west. After walking for 27m he reaches point D. From point D he takes a left turn and walks for another 20m and reaches point C. From point C he turns right and walks for another 27m and reaches point B. From point B he takes a right turn of 10m and reaches at point A.

Q89. In which direction is the person's final point with respect to point F?

(a) South

(b) South-west

(c) North

(d) North-west

(e) None of these

Q90. If point S is exactly between point C and point D, how far and in which direction is point S with respect to point A?

(a) 10m, west

(b) 20m, east

(c) 27m, west

(d) 27m, east

(e) None of these

Q91. In which direction is point B with respect to point D?

(a) South

(b) South-west

(c) North-east

(d) North-west

(e) None of these

Directions (92-96) : Study the following information carefully and answer the questions given below.

A certain number of persons sit in a row facing north direction. Eight persons sit between P and M who sit immediately left of R. A sits 2nd to the left of M. One person sits between M and Z. The number of persons sits between P and W is thrice of the number of persons sits between A and Z. D is the only neighbour of P. The Number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A.

Q92. How many persons sit in the row?
(a) 15
(b) 13
(c) 17
(d) 20
(e) Can't be determined

Q93. Who among the following sits 3ʳᵈ to the right of R?
(a) D
(b) S
(c) W
(d) P
(e) Unknown person

Q94. How many persons sit between W and O?
(a) Three
(b) Four
(c) Five
(d) Six
(e) Two

Q95. If W sits 2ⁿᵈ to the right of K, then how many persons will sit between K and D?
(a) Eight
(b) Ten
(c) Seven
(d) Nine
(e) Can't be determined

Q96. The number of persons sits between A and P is twice than the number of persons sits between ___ and ____.
(a) D, M
(b) R, W
(c) P, Z
(d) R, P
(e) O, R

Directions (97-100) : Study the following information carefully and answer the questions given below:
Seven persons were born in different years viz. 1985, 1992, 1994, 1998, 1999, 2001 and 2004. Their ages are calculated as a base year of 2022. The difference between the ages of G and K is 3. F is 7 years older than K. The number of persons who were born between F and G is same as the number of persons who were born between S and D. The number of persons who were born after S is same as the number of persons who were born before L. H is not the oldest among all.

Q97. What is the difference between the ages of L and F?
(a) 7 years
(b) 10 years
(c) 12 years
(d) 8 years
(e) None of these

Q98. How many persons are older than H?
(a) 2
(b) 1
(c) 3
(d) 5
(e) None of these

Q99. Who among the following was born in 1994?
(a) F
(b) S
(c) D
(d) H
(e) K

Q100. The number of persons who were born between G and K is half of the number of persons who were born between ___ and ___.
(a) H, D
(b) S, K
(c) L, H
(d) F, S
(e) None of these

Solutions

S1. Ans.(d)
Sol. The correct choice is option (d) . Refer to the first paragraph which mentions, "A growing number of poor women in different areas of India are members of Self Help Groups and they actively occupy in savings and credit, as well as activities like income creation, natural resources management etc. The savings and credit hub in the SHG is the key component and offers ability to create some control over capital and other investments."

S2. Ans.(c)
Sol. To validate the answer, refer to the first paragraph which mentions, "The SHG scheme has proven to be very successful for women empowerment and offering to break slowly away from exploitation and isolation."

S3. Ans.(b)
Sol. The correct choice is option (b) which can be inferred from the second paragraph which mentions, "Members make small regular savings aid over a few months until there is enough capital in the group to begin lending. Funds may then be lent back to the members or to others in the village for any reason."

S4. Ans.(c)
Sol. The correct choice is option (c) which can be inferred from the second paragraph which mentions, "Only those SHGs that have utilized their own funds well are assisted with external funds through linkages with banks and other financial mediators."

S5. Ans.(a)
Sol. All the given statements are coherent with NABARD's definition of SHG except option (a) . To validate, refer to the second paragraph which mentions, "NABARD defines SHGs as "small, economically homogenous affinity groups of rural poor, voluntarily formed to save and mutually contribute to a common fund to be lent to its members as per the group members' decision".

S6. Ans.(b)
Sol. 'Compact' is an antonym of 'extensive'.
acquit means free (someone) from a criminal charge by a verdict of not guilty.
compact means having all the necessary components or features neatly fitted into a small space.
instigate means bring about or initiate (an action or event) .
assent means the expression of approval or agreement.

S7. Ans.(b)
Sol. Statement (iii) is incorrect as per the information given in the passage.
For statement (i) , refer to the second paragraph which mentions, "A self-help group is a village-based financial intermediary usually composed of 10–20 local women."
For statement (ii) , refer to the first paragraph which mentions, "Self- help groups (SHGs) play vital role in poverty eradication in Indian villages"
For statement (iii) , refer to the second paragraph which mention, "The Self Help Groups (SHGs) have become extensive, successful component of both rural and urban development in India"

S8. Ans.(c)
Sol. 'Segregation' is a synonym of 'isolation'
isolation means the process or fact of isolating or being isolated.
exhume means dig out (something buried, especially a corpse) from the ground.
cognizant means having knowledge or awareness.
segregation means the action or state of setting someone or something apart from others.
inception means the establishment or starting point of an institution or activity.

S9. Ans.(a)
Sol. 'agitated' is an antonym of 'composed'.
Composed: To be composed means to be calm, tranquil, and in control of one's emotions, thoughts, or behaviour, especially in stressful or challenging situations.
Agitated: To be in a state of agitation means to be disturbed, restless, or anxious.
Calmed: To be calmed means to have achieved a state of tranquillity, relaxation, or peace.
Collected: Being collected refers to being composed, calm, and in control of one's emotions, actions, or demeanour.
centred: To be centred means to have a sense of inner balance, stability, or focus.

S10. Ans.(d)
Sol. Here, the error lies in the statement given in option (d) , where "pulled in" will be replaced by "pulled back". "**Pull in**" means *"(of a vehicle) move to the side of or off the road"* and "**pull back**" means "*to decide not to do something that will probably have bad effects*". Hence, option (d) is the most suitable answer choice.

S11. Ans.(d)
Sol. Among the given statements, all of them are grammatically correct and do not require any improvements. Hence, option (d) is the most suitable answer choice.

S12. Ans.(c)
Sol. Here, the error lies in statement given in option (c) , where, "**honestness**" will be replaced with "**honesty**" because "honest" is an adjective, whose noun form is "honesty" and not honestness". Hence, option (c) is the most suitable answer choice.

S13. Ans.(d)
Sol. Here, the error lies in statement given in option (d) , where "**a just**" will be replaced with "**just a**". Hence, option (d) is the most suitable answer choice.

S14. Ans.(a)
Sol. Here, the error lies in the statement given in option (a) , where "Since" will be replaced with "For".

S15. Ans.(e)
Sol. 'Eradicate' which means 'to destroy or get rid of something completely' has been used correctly in the sentence (i) and in the sentence (ii) .

S16. Ans.(b)
Sol. 'Pursue' which means 'to try to achieve something or to continue to do something over a period of time' has been used correctly in the statement (i) and statement (iii) .

S17. Ans.(c)
Sol. The concerned sentence is talking continuous long hours of sitting can lead to many health complications. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'uninterrupted'.
repulsive means arousing intense distaste or disgust.
relegated means assign an inferior rank or position to.
facilely means easily accomplished or attained
impeded means delay or prevent (someone or something) by obstructing them; hinder.
uninterrupted means without a break in continuity.

S18. Ans.(e)
Sol. The given highlighted word is correct hence no replacement required.
rally means bring or come together in order to support a person or cause
expansion means the action of becoming larger or more extensive.
oppression means prolonged cruel or unjust treatment or exercise of authority.
cajole means persuade (someone) to do something by sustained coaxing or flattery.

S19. Ans.(a)
Sol. The statement is mentioning that many corporate offices are stressing the importance of right sitting posture. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'stressing'.
embracing means accept (a belief, theory, or change) willingly and enthusiastically.
stressing means give particular emphasis or importance to (a point, statement, or idea) made in speech or writing.
freighting means be laden or burdened with
dampening means make slightly wet.
veneering means cover or disguise (someone or something's true nature) with an attractive appearance.

S20. Ans.(d)
Sol. The statement is mentioning that employees who work in sitting position for long hours complain of these postural problems. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'complain'.
combat means take action to reduce or prevent (something bad or undesirable) .
grapple means engage in a close fight or struggle without weapons; wrestle.
disarray means a state of disorganization or untidiness.
turmoil means a state of great disturbance, confusion, or uncertainty.

S21. Ans.(b)
Sol. The statement is mentioning that when someone complains of postural problems, a confirmation is done by an X-ray or MRI scan. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'confirmation'.
reckoning means the action or process of calculating or estimating something.
suggestion means an idea or plan put forward for consideration.
confirmation means the action of establishing the truth or correctness of (something previously believed or suspected to be the case) .

opinion means a view or judgement formed about something, not necessarily based on fact or knowledge.

conference means a formal meeting for discussion.

S22. Ans.(c)
Sol. The statement is mentioning that appropriate exercises are suggested to correct the damage. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'appropriate'.

edifice means a complex system of beliefs.

mediocre means of only average quality; not very good.

rotten means suffering from decay.

appropriate means suitable or proper in the circumstances.

nascent means just coming into existence and beginning to display signs of future potential.

S23. Ans.(a)
Sol. The sentence is mentioning that along with appropriate exercise, patients are recommended to undergo physiotherapy sessions also, if required. Therefore, the highlighted word is incorrect and needs to be replaced. Its correct replacement is 'undergo'.

engulf means powerfully affect (someone) ; overwhelm.

undergo means experience or be subjected to (something, typically something unpleasant or arduous) .

contemplate means look thoughtfully for a long time at.

strive means make great efforts to achieve or obtain something.

assess means evaluate or estimate the nature, ability, or quality of.

S24. Ans.(a)
Sol. We need to interchange (A) -(C) to make the sentence contextually meaningful. After interchange, the sentence will be, "UNESCO is ready to assist in carrying out a professional potentiality analysis."

S25. Ans.(c)
Sol. We need to interchange (A) -(D) and (B) -(C) to make the sentence contextually meaningful. After interchange the sentence will be, "Burning of crop residue causes damage to other micro-organisms present in the upper layer of the soil.'

S26. Ans.(b)
Sol. We need to interchange (B) -(D) to make the sentence contextually meaningful. After interchange the sentence will be, "For most of human history the dominant view has been that animals are there for humans to do with as they see fit".

S27. Ans.(d)
Sol. In English, when expressing a general truth, fact, or habitual action that occurs whenever a specific condition is met, we use the present simple tense. In this case, the condition is "Whenever it is raining," which sets the stage for a general situation. The verb should be in the present simple tense to match this condition.

The present simple tense for the third person singular (he, she, it) typically takes the form of the base verb (without the "-s" ending) or, in this case, "it rains."

S28. Ans.(b)
Sol. The correct replacement is option (b) . 'Each of the' is followed by plural noun and singular verb. The grammatical rule here is subject-verb agreement. When you have a phrase like "Each of," it is considered a singular subject, and the verb should be singular as well. In this case, "each of the family members" refers to each individual member, but the sentence treats them collectively as a singular unit for the purpose of subject-verb agreement. Therefore, you should use "is" instead of "are" to match the singular subject.

S29. Ans.(d)
Sol. The correct replacement is option (d) . 'To' shouldn't be used. The correct structure of sentence should be, "Let+ Subject+ V1'. The phrase "to get to" is the correct form here, meaning that criticism should not affect or trouble your heart. The other options are not grammatically correct or appropriate in this context.

S30. Ans.(e)
Sol. The given sentence is error-free.

S31. Ans.(a)
Sol.

Total balls in bag $= x + x - 2 + x + 2 = 3x$

ATQ,

$$\frac{^xC_2}{^{3x}C_2} = \frac{1}{12}$$

$$\frac{x(x-1)}{3x(3x-1)} = \frac{1}{12}$$

$4x - 4 = 3x - 1$

$x = 3$

Total balls $= 3x = 9$.

S32. Ans.(c)
Sol.

Interest earned by Veer $= \frac{x \times 10 \times 2}{100}$

$= Rs.\frac{x}{5}$

Interest earned by Anurag $= (x + 300) \times \left\{ \left(1 + \frac{12\frac{1}{2}}{100}\right)^2 - 1 \right\}$

$= Rs.\left(\frac{17}{64} \times (x + 300) \right)$

ATQ,

$\frac{17}{64} \times (x + 300) - \frac{x}{5} = 480$

$\frac{21x}{320} = \frac{6405}{16}$

x= Rs. 6100

so, required result = Rs. 6100 + Rs. 300 = Rs. 6400

S33. Ans.(e)
Sol.
Let the speed of boat in still water be 5m km/hr
Let the speed of stream be 3m km/hr
So, Upstream speed= 5m−3m=2m km/hr
Downstream speed=5m+3m=8m km/hr
ATQ,

$\frac{240}{8m} + \frac{240}{2m} = 5$

$240 \left(\frac{1}{8m} + \frac{1}{2m}\right) = 5$

$240 \left(\frac{1+4}{8m}\right) = 5$

m= 30

Downstream speed= 8m=8×30=240 km/hr

Required time $= \frac{640}{240} = \frac{8}{3} = 2\frac{2}{3}$ hours

S34. Ans.(a)
Sol.
Quantity of water in 500 ml of mixture which taken out $= \frac{x}{x+9} \times 500$
ATQ -
Quantity of water in in the new mixture $= \frac{7}{10} \times (500 + 100)$
$\frac{x}{x+9} \times 500 + 100 = \frac{7}{10} \times (500 + 100)$
$\frac{x}{x+9} \times 500 = 420 - 100$
$\frac{x}{x+9} = \frac{16}{25}$
$9x = 144$
$x = 16$

S35. Ans.(c)
Sol.
Let speed of train A = S_a
ATQ—
$S_a = \frac{350}{17.5} = 20 \text{ m/s}$
Let speed of train B = S_b
ATQ— $20 + S_b = \frac{(350+420)}{15.4}$
$S_b = \frac{770}{15.4} - 20$
$S_b = 50 - 20 = 30 \text{ m/s}$
Relative speed if train A and B running in same direction
$= 30 - 20$
$= 10 \text{ m/s}$
Required time $= \frac{(350+420)}{10} = 77 \text{ sec}$

S36. Ans.(d)
Sol.
Let length & breadth of the rectangle be 2X and X metres respectively.
Perimeter of rectangle = 2×(l+b) =348
            2×(2X+1X) =348
            X=58m
Length =58x2=116
Breadth=58x1=58
Number of bricks required = N
So, N×(4×3) = 116×58
N=561 (approx)

S37. Ans.(c)
Sol.
Let efficiency of Deepak and Shivam are 5x unit/day and 6x unit/day respectively.
So, total work = 11(5x) + 31 (5x + 6x)
= 55x + 341x
= 396x unit
Now, T $= \frac{396x}{5x+6x} = 36$

S38. Ans.(e)

Sol.

Let cost price of article – A be Rs.100x

So, marked price of article – A = $100x \times \frac{160}{100}$ = Rs.160x

And, selling price of article – A = $160x \times \frac{80}{100}$ = Rs.128x

ATQ,

$(160x - 128x) - (128x - 100x) = 20$

$x = 5$

Now, CP of article – B = $100 \times 5 \times \frac{100}{80}$ = Rs.625

S39. Ans.(d)

Sol.

Let A and B invest 10x and 7x respectively.

Respective ratio of profit share of A and B =

$$\frac{(10x \times T + 10x \times \frac{50}{100} \times (12-T))}{((7x \times T + 7x \times 1.4 \times (12-T)))} = \frac{95}{98}$$

$$\frac{10T + 60 - 5T}{7T + 117.6 - 9.8T} = \frac{95}{98}$$

$T = 7$

S40. Ans.(b)

Sol.

$(15.02 \times 12) \div 11.99 + 24.78^2 = ?$

$(15 \times 12) \div 12 + 25^2 = ?$

$15 + 625 = ?$

$? = 640$

S41. Ans.(c)

Sol.

$109 + \frac{512}{16} - ?^2 = 21^2 - 20^2$

$109 + 32 - 41 = ?^2$

$?^2 = 100$

$? = 10$

S42. Ans.(b)

Sol.

$\frac{20}{100} \times ? + \frac{70}{100} \times 700 = \sqrt{676} \div 13 + 500$

$\frac{?}{5} + 490 = 26 \div 13 + 500$

$? = 12 \times 5$

$= 60$

S43. Ans.(a)

Sol.

$\sqrt[8]{2197} \div \sqrt{1521} \times 3 + ? = 144$

$\frac{13}{39} \times 3 + ? = 144$

$? = 143$

S44. Ans.(e)

Sol.

$32 \times 55 - ? = 1728 + \frac{8}{100} \times 250$

$1760 - ? = 1728 + 20$

$? = 12$

S45. Ans.(d)

Sol.

$\frac{?}{81} + \frac{24}{100} \times 325 + \frac{56}{8} = 88$

$\frac{?}{81} + 78 + 7 = 88$

$\frac{?}{81} = 3$

$? = 243$

S46. Ans.(b)

Sol.

Total number of Sports shoes sold by shop C = $8000 \times \frac{35}{100} - 4400 \times \frac{40}{100} = 2800 - 1760 = 1040$

Total number of Sports shoes sold by shop E = $8000 \times \frac{18}{100} - 4400 \times \frac{15}{100} = 1440 - 660 = 780$

Total number of Sneakers shoes sold by shop B and D together = $4400 \times \frac{20+10}{100} = 1320$

Require percentage = $\frac{(1040+780-1320)}{1320} \times 100$

$= \frac{500}{1320} \times 100 = 37.87\% \approx 38\%$

S47. Ans.(c)

Sol.

Total number of Sneakers shoes sold by shop A = $4400 \times \frac{15}{100} = 660$

Total number of Sports shoes sold by shop D = $8000 \times \frac{12}{100} - 4400 \times \frac{10}{100}$

$= 960 - 440 = 520$

Required ratio = $660 : 520 = 33 : 26$

S48. Ans.(a)
Sol.

Total number of Sports shoes sold by shop A = $8000 \times \frac{20}{100} - 4400 \times \frac{15}{100} = 1600 - 660 = 940$

Total number of Sports shoes sold by shop B = $8000 \times \frac{15}{100} - 4400 \times \frac{20}{100} = 1200 - 880 = 320$

Required average = $\frac{940+320}{2} = 630$

S49. Ans.(c)
Sol.

Total number of Sports shoes sold by shop C = $8000 \times \frac{35}{100} - 4400 \times \frac{40}{100}$

= $2800 - 1760 = 1040$

Total number of Sports shoes sold by shop D = $8000 \times \frac{12}{100} - 4400 \times \frac{10}{100}$

= $960 - 440 = 520$

Total number of Sneakers shoes sold by shop C and E together = $4400 \times \frac{55}{100}$

= 2420

Required difference = $2420 - (1040 + 520) = 860$

S50. Ans.(e)
Sol.

Total number of shoes in 2020 in shop A = $8000 \times \frac{20}{100} = 1600$

Total number of shoes in 2021 in shop A = $1600 \times \frac{120}{100} = 1920$

Total number of Sneakers shoes in 2020 in shop A = $4400 \times \frac{15}{100} = 660$

Total number of Sneakers shoes in 2021 in shop A = $660 \times \frac{115}{100} = 759$

Total number of Sports shoes in 2021 in shop A = $1920 - 759 = 1161$

S51. Ans.(d)
Sol. Let no. of male and female in H.R. department be 7x and 10x respectively.

No. of female in Finance department = $10x \times \frac{120}{100} = 12x$

No. of male in Finance department in company Z = 12x+6

Total no. of male = $39 \times 3 = 117$

No. of female in sales department = $12x \times \frac{125}{100} = 15x$

ATQ.

$7x + 12x + 6 + 35 = 117$

$19x = 76$

$x = 4$

Department	Male	Female
H.R.	$7x = 7 \times 4$ = 28	$10x = 10 \times 4$ = 40
Finance	48+6=54	$12x = 12 \times 4$ = 48
Sales	35	$15x = 15 \times 4$ = 60

Total no. of employees in marketing department = $35 \times \frac{140}{100} + 60 \times \frac{120}{100}$

$= 49 + 72 = 121$

S52. Ans.(e)

Sol. Let no. of male and female in H.R. department be 7x and 10x respectively.

No. of female in Finance department = $10x \times \frac{120}{100} = 12x$

No. of male in Finance department in company Z = 12x+6

Total no. of male = $39 \times 3 = 117$

No. of female in sales department = $12x \times \frac{125}{100} = 15x$

ATQ.

$7x + 12x + 6 + 35 = 117$

$19x = 76$

$x = 4$

Department	Male	Female
H.R.	$7x = 7 \times 4$ $= 28$	$10x = 10 \times 4$ $= 40$
Finance	48+6=54	$12x = 12 \times 4$ $= 48$
Sales	35	$15x = 15 \times 4$ $= 60$

Req. ratio = 28 : 48 = 7 : 12

S53. Ans.(d)

Sol. Let no. of male and female in H.R. department be 7x and 10x respectively.

No. of female in Finance department = $10x \times \frac{120}{100} = 12x$

No. of male in Finance department in company Z = 12x+6

Total no. of male = $39 \times 3 = 117$

No. of female in sales department = $12x \times \frac{125}{100} = 15x$

ATQ.

$7x + 12x + 6 + 35 = 117$

$19x = 76$

$x = 4$

Department	Male	Female
H.R.	$7x = 7 \times 4$ $= 28$	$10x = 10 \times 4$ $= 40$
Finance	48+6=54	$12x = 12 \times 4$ $= 48$
Sales	35	$15x = 15 \times 4$ $= 60$

Req. average = $\frac{40+48+60}{3}$ = $49\frac{1}{3}$

S54. Ans.(a)
Sol. Let no. of male and female in H.R. department be 7x and 10x respectively.

No. of female in Finance department = $10x \times \frac{120}{100}$ = $12x$

No. of male in Finance department in company Z = 12x+6

Total no. of male = 39 × 3 = 117

No. of female in sales department = $12x \times \frac{125}{100}$ = $15x$

ATQ.

$7x + 12x + 6 + 35 = 117$

$19x = 76$

$x = 4$

Department	Male	Female
H.R.	7x = 7 × 4 = 28	10x = 10 × 4 = 40
Finance	48+6=54	12x = 12 × 4 = 48
Sales	35	15x = 15 × 4 = 60

Req. percentage = $\frac{60-40}{40}$ = 50%

S55. Ans.(b)
Sol. Let no. of male and female in H.R. department be 7x and 10x respectively.

No. of female in Finance department = $10x \times \frac{120}{100}$ = $12x$

No. of male in Finance department in company Z = 12x+6

Total no. of male = 39 × 3 = 117

No. of female in sales department = $12x \times \frac{125}{100}$ = $15x$

ATQ.

$7x + 12x + 6 + 35 = 117$

$19x = 76$

$x = 4$

Department	Male	Female
H.R.	7x = 7 × 4 = 28	10x = 10 × 4 = 40
Finance	48+6=54	12x = 12 × 4 = 48
Sales	35	15x = 15 × 4 = 60

Req. difference = 40+48+60-(28+54+35)
= 148-117 = 31

S56. Ans.(c)
Sol. Unsold chairs of A & D together in 2016 = (1200-840) +(900-810)
= 360 + 90
= 450
Required % = $\frac{450}{1080+720}$ × 100 = 25%

S57. Ans.(a)
Sol.
Total manufacturing cost of chairs for D in 2016 = 200 × 900 = Rs.1,80,000
Total manufacturing cost of chairs for D in 2017 = 200 × 1200 = Rs.2,40,000
Total revenue from chairs for D in 2016 = 250 × 810 = Rs.2,02,500
Total revenue from chairs for D in 2017 = 400 × 720 = Rs.2,88,000
Profit % of D in 2016 = $\frac{202500-180000}{180000}$ × 100 = 12.5%
Profit % of D in 2017 = $\frac{288000-240000}{240000}$ × 100 = 20%
So, profit% is maximum in 2017 for D.

S58. Ans.(d)
Sol.
Required ratio = $\frac{1200+600}{900+720}$
= $\frac{1800}{1620}$
= 10 : 9

S59. Ans.(b)
Sol.
Chairs manufactured by A in 2018 = $\frac{150}{100}$ × 900 = 1350
Chairs sold by A in 2018 = 1350 × $\frac{2}{3}$ = 900
Required average = $\frac{840+1440+900}{3}$ = 1060

S60. Ans.(a)
Sol.
Average number of chairs sold by A, B, C & D in 2016 = $\frac{840+900+570+810}{4}$ = 780
Total unsold chairs of A, B, C & D together in 2017 = 160 + 120 + 100 + 480 = 860
Required difference = 860 − 780 = 80

S61. Ans.(a)
Sol.
I. $2x^2 - 13x + 20 = 0$
$2x^2 - 8x - 5x + 20 = 0$
$2x(x - 4) - 5(x - 4) = 0$
$(2x - 5)(x - 4) = 0$
$x = \frac{5}{2}, 4$

II. $y^2 + 10y + 24 = 0$
$y^2 + 6y + 4y + 24 = 0$
$y(y + 6) + 4(y + 6) = 0$
$(y + 4)(y + 6) = 0$
$y = -4, -6$
So, x> y

S62. Ans.(b)
Sol.

I. $x^2 - 9x + 18 = 0$
$x^2 - 6x - 3x + 18 = 0$
$x(x - 6) - 3(x - 6) = 0$
$(x - 3)(x - 6) = 0$
$x = 3, 6$
II. $2y^2 - 9y + 9 = 0$
$2y^2 - 6y - 3y + 9 = 0$
$2y(y - 3) - 3(y - 3) = 0$
$(2y - 3)(y - 3) = 0$
$y = \frac{3}{2}, 3$
So, x≥ y

S63. Ans.(e)
Sol.

I. $x^2 - 17x + 70 = 0$
$x^2 - 10x - 7x + 70 = 0$
$x(x - 10) - 7(x - 10) = 0$
$(x - 7)(x - 10) = 0$
$x = 7, 10$
II. $y^2 - 14y + 48 = 0$
$y^2 - 6y - 8y + 48 = 0$
$y(y - 6) - 8(y - 6) = 0$
$(y - 8)(y - 6) = 0$
$y = 8, 6$
So, no relation can be established between x and y.

S64. Ans.(e)
Sol.
I. $4x^2 + 3x - 10 = 0$
$4x^2 + 8x - 5x - 10 = 0$
$4x(x + 2) - 5(x + 2) = 0$
$(4x - 5)(x + 2) = 0$
$x = \frac{5}{4}, -2$

II. $y^2 + 10y - 119 = 0$
$y^2 + 17y - 7y - 119 = 0$
$y(y + 17) - 7(y + 17) = 0$
$(y - 7)(y + 17) = 0$
$y = 7, -17$
So, no relation can be established between x and y.

S65. Ans.(a)
Sol.
I. $x^2 - 11x + 28 = 0$
$x^2 - 7x - 4x + 28 = 0$
$x(x - 7) - 4(x - 7) = 0$
$(x - 4)(x - 7) = 0$
$x = 4, 7$
II. $y^2 + 13y + 30 = 0$
$y^2 + 3y + 10y + 30 = 0$
$y(y + 3) + 10(y + 3) = 0$
$(y + 10)(y + 3) = 0$
$y = -10, -3$
So, x> y

S66. Ans.(b)
Sol. There are three such pairs.

E X T I N G U I S H

S67. Ans.(a)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases:-

Case 1

Case 2

Case3

Four persons sit between K and G and both of them face the same direction. Case 1 is cancelled here, R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G. Case 3 is cancelled now:
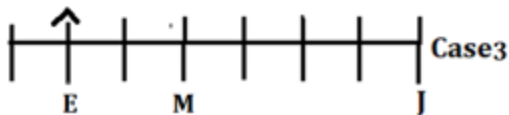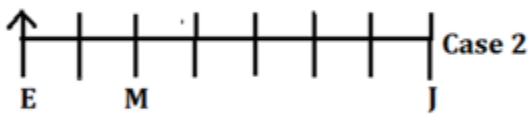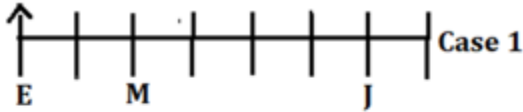
Case 1

Case 2

Case3

R and P face in the same direction, which means they will face north as per the given condition i.e., not more than two adjacent persons face the same direction. Hence, the final arrangement is:
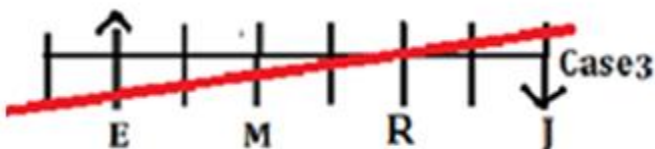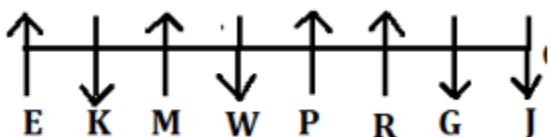

Three persons sit between P and E.

S68. Ans.(d)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases:-

Case 1

Case 2

Case3

Four persons sit between K and G and both of them face the same direction. Case 1 is cancelled here, R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G. Case 3 is cancelled now:
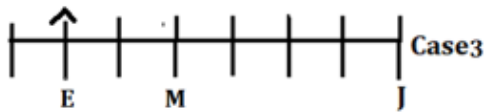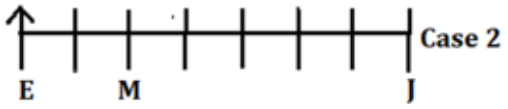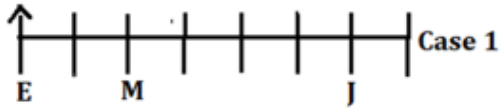

Case 1

Case 2

Case3

R and P face in the same direction, which means they will face north as per the given condition i.e., not more than two adjacent persons face the same direction. Hence, the final arrangement is:

J sits 2ⁿᵈ to the right of R

S69. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2ⁿᵈ to the right of E. There are three possible cases: -

Four persons sit between K and G and both of them face the same direction. Case 1 is cancelled here, R sits 2ⁿᵈ to the right of J. R and W doesn't sit adjacent to each other. W sits 3ʳᵈ to the right of G. Case 3 is cancelled now:

R and P face in the same direction, which means they will face north as per the given condition i.e., not more than two adjacent persons face the same direction. Hence, the final arrangement is:
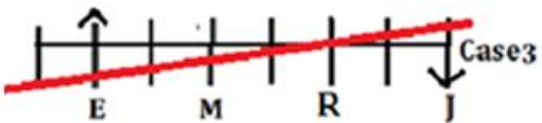

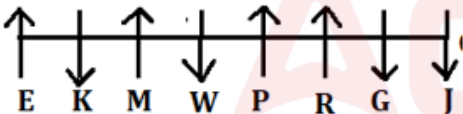Only E sits at the extreme left end of the row

S70. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases:-

Case 1

Case 2

Case3

Four persons sit between K and G and both of them face the same direction. Case 1 is cancelled here, R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G. Case 3 is cancelled now:
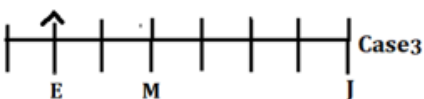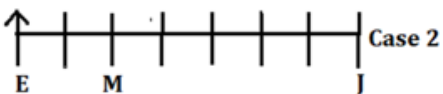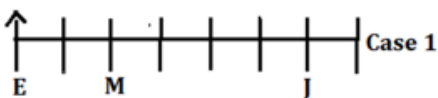

Case 1

Case 2

Case3

R and P face in the same direction, which means they will face north as per the given condition i.e., not more than two adjacent persons face the same direction. Hence, the final arrangement is:

R sits immediately right of P.

S71. Ans.(c)
Sol. More than four persons sit between J and E who faces north. M sits 2nd to the right of E. There are three possible cases:-

Case 1

Case 2

Case3

Four persons sit between K and G and both of them face the same direction. Case 1 is cancelled here, R sits 2nd to the right of J. R and W doesn't sit adjacent to each other. W sits 3rd to the right of G. Case 3 is cancelled now:

R and P face in the same direction, which means they will face north as per the given condition i.e., not more than two adjacent persons face the same direction. Hence, the final arrangement is:
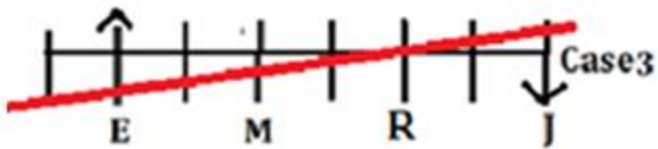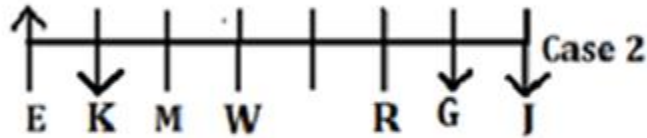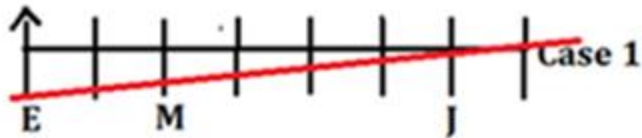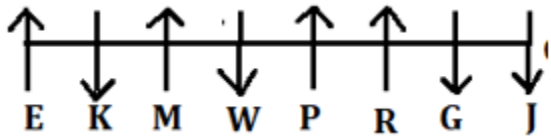

Four persons face south direction.

S72. Ans.(a)
Sol. I. Follows – Because all I is R and no K is I, so the part of R which is I cannot be K.
II. Not Follows – Because Some U is K and no K is I, so all U cannot be I.
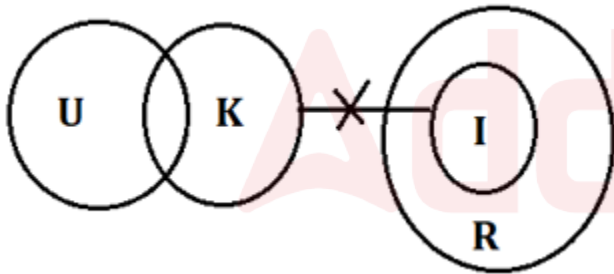
S73. Ans.(a)
Sol. I. Follows – Because there is no direct relation between Hoo and Loo, so their relation will follow in possibilities.
II. Not Follows – Because there is no direct relation between Soo and Loo, so definite relation will not follow.

S74. Ans.(d)
Sol. I. Not Follows – Because there is no direct relation between Singer and Artist, so any definite relation will not follow.
II. Not Follows – Because there is no direct relation between Singer and Dancer, so any definite relation will not follow.

S75. Ans.(e)
Sol. I. Follows – Because Tata is only related to Train, its relation with any other element will not follow.
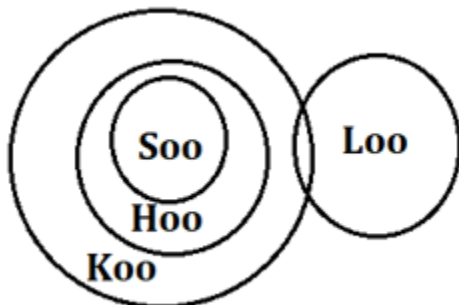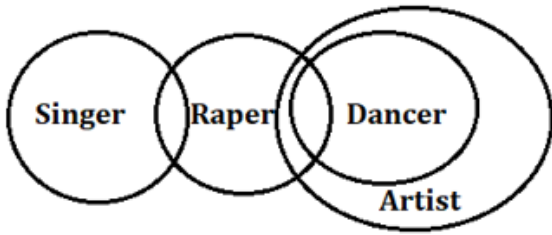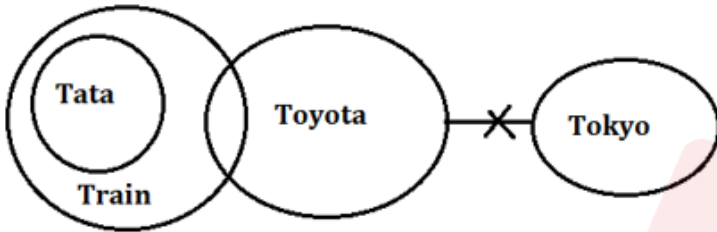II. Follows – because Tata is only related to the Train, so the part of Train which is Tata cannot be Tokyo. Also, the part of the Train which is Toyota cannot be Tokyo.

S76. Ans.(a)
Sol. I. Follows – because there is no relation between Style and Edit, so their relation will follow in possibility.
II. Not follows – because there is no direct relation between Size and Edit, so any definite relation will not follow.
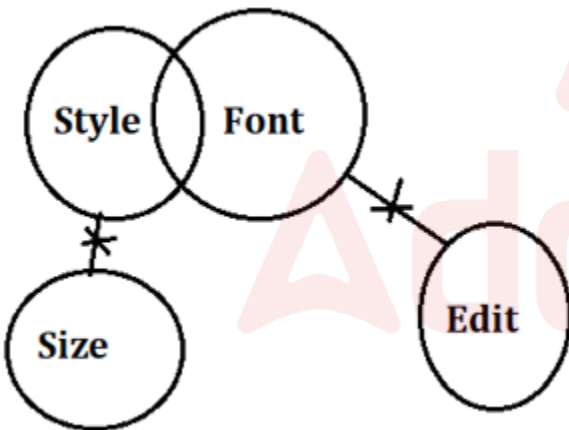
S77. Ans.(c)
Sol. The one who belongs to Jaipur goes three persons before F. F goes after June. So, here we have three possible cases:

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January						
March		Jaipur				
April				Jaipur		
June						Jaipur
August	F					
September			F			
December					F	

D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having odd number of days. So, case 2 gets eliminated here.

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January		Agra		Agra		Agra
March		Jaipur				
April	D	Manali	D	Jaipur	D	Manali
June	A		A		A	Jaipur
August	F					
September	C		F		C	
December					F	

The number of persons who go before D is same as the number of persons who go after E. So, case 1 gets eliminated here. B goes just before the one who belongs to Mathura.

Months	Case 1		Case 3	
	Persons	Cities	Persons	Cities
January		Agra	B	Agra
March		Jaipur		Mathura
April	D	Manali	D	Manali
June	A		A	Jaipur
August	F		E	
September	G		C	
December			F	

More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Months	Case 3	
	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	
December	F	Indore

Shimla is only left. So, C belongs to Shimla. Thus, the final arrangement is:

Months	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	Shimla
December	F	Indore

C belongs to Shimla.

S78. Ans.(d)
Sol. The one who belongs to Jaipur goes three persons before F. F goes after June. So, here we have three possible cases:

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January						
March		Jaipur				
April				Jaipur		
June						Jaipur
August	F					
September			F			
December					F	

D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having odd number of days. So, case 2 gets eliminated here.

Months	Case 1		~~Case 2~~		Case 3	
	Persons	Cities	~~Persons~~	~~Cities~~	Persons	Cities
January		Agra		~~Agra~~		Agra
March		Jaipur				
April	D	Manali	~~D~~	~~Jaipur~~	D	Manali
June	A		~~A~~		A	Jaipur
August	F					
September	C		~~F~~		C	
December					F	

The number of persons who go before D is same as the number of persons who go after E. So, case 1 gets eliminated here. B goes just before the one who belongs to Mathura.

Months	~~Case 1~~		Case 3	
	~~Persons~~	~~Cities~~	Persons	Cities
January		~~Agra~~	B	Agra
March		~~Jaipur~~		Mathura
April	~~D~~	~~Manali~~	D	Manali
June	~~A~~		A	Jaipur
August	~~F~~		E	
September	~~C~~		C	
December			F	

More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Months	Case 3	
	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	
December	F	Indore

Shimla is only left. So, C belongs to Shimla. Thus, the final arrangement is:

Months	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	Shimla
December	F	Indore

Five persons go between B and the one who belongs to Indore.

S79. Ans.(b)
Sol. The one who belongs to Jaipur goes three persons before F. F goes after June. So, here we have three possible cases:

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January						
March		Jaipur				
April				Jaipur		
June						Jaipur
August	F					
September			F			
December					F	

D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having odd number of days. So, case 2 gets eliminated here.

Months	Case 1		~~Case 2~~		Case 3	
	Persons	Cities	~~Persons~~	~~Cities~~	Persons	Cities
January		Agra		~~Agra~~		Agra
March		Jaipur				
April	D	Manali	~~D~~	~~Jaipur~~	D	Manali
June	A		~~A~~		A	Jaipur
August	F					
September	C		~~F~~		C	
December					F	

The number of persons who go before D is same as the number of persons who go after E. So, case 1 gets eliminated here. B goes just before the one who belongs to Mathura.

Months	~~Case 1~~		Case 3	
	~~Persons~~	~~Cities~~	Persons	Cities
January		~~Agra~~	B	Agra
March		~~Jaipur~~		Mathura
April	~~D~~	~~Manali~~	D	Manali
June	~~A~~		A	Jaipur
August	~~F~~		E	
September	~~G~~		C	
December			F	

More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Months	Case 3	
	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	
December	F	Indore

Shimla is only left. So, C belongs to Shimla. Thus, the final arrangement is:

Months	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	Shimla
December	F	Indore

The position of one person i.e., E remains unchanged.

S80. Ans.(e)
Sol. The one who belongs to Jaipur goes three persons before F. F goes after June. So, here we have three possible cases:

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January						
March		Jaipur				
April				Jaipur		
June						Jaipur
August	F					
September			F			
December					F	

D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having odd number of days. So, case 2 gets eliminated here.

Months	Case 1		~~Case 2~~		Case 3	
	Persons	Cities	~~Persons~~	~~Cities~~	Persons	Cities
January		Agra		~~Agra~~		Agra
March		Jaipur				
April	D	Manali	~~D~~	~~Jaipur~~	D	Manali
June	A		~~A~~		A	Jaipur
August	F					
September	C		~~F~~		C	
December					F	

The number of persons who go before D is same as the number of persons who go after E. So, case 1 gets eliminated here. B goes just before the one who belongs to Mathura.

Months	Case 1		Case 3	
	Persons	Cities	Persons	Cities
January		Agra	B	Agra
March		Jaipur		Mathura
April	D	Manali	D	Manali
June	A		A	Jaipur
August	F		E	
September	G		C	
December			F	

More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Months	Case 3	
	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	
December	F	Indore

Shimla is only left. So, C belongs to Shimla. Thus, the final arrangement is:

Months	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	Shimla
December	F	Indore

All statements are true.

S81. Ans.(b)
Sol. The one who belongs to Jaipur goes three persons before F. F goes after June. So, here we have three possible cases:

Months	Case 1		Case 2		Case 3	
	Persons	Cities	Persons	Cities	Persons	Cities
January						
March		Jaipur				
April				Jaipur		
June						Jaipur
August	F					
September			F			
December					F	

D goes just before A and both of them go in the month having an even number of days. Two persons go between A and the one who belongs to Agra. The one who belongs to Agra doesn't go last. C goes three persons after the one who belongs to Manali. C doesn't go in the month having odd number of days. So, case 2 gets eliminated here.

Months	Case 1		Case 2		Case 3	
	Persons	Cities	~~Persons~~	~~Cities~~	Persons	Cities
January		Agra		~~Agra~~		Agra
March		Jaipur				
April	D	Manali	~~D~~	~~Jaipur~~	D	Manali
June	A		~~A~~		A	Jaipur
August	F					
September	C		~~F~~		C	
December					F	

The number of persons who go before D is same as the number of persons who go after E. So, case 1 gets eliminated here. B goes just before the one who belongs to Mathura.

Months	~~Case 1~~		Case 3	
	~~Persons~~	~~Cities~~	Persons	Cities
January		~~Agra~~	B	Agra
March		~~Jaipur~~		Mathura
April	~~D~~	~~Manali~~	D	Manali
June	~~A~~		A	Jaipur
August	~~F~~		E	
September	~~G~~		C	
December			F	

More than three persons go between the one who belongs to Indore and G. The one who belongs to Meerut goes in the month having an odd number of days.

Months	Case 3	
	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	
December	F	Indore

Shimla is only left. So, C belongs to Shimla. Thus, the final arrangement is:

Months	Persons	Cities
January	B	Agra
March	G	Mathura
April	D	Manali
June	A	Jaipur
August	E	Meerut
September	C	Shimla
December	F	Indore

G- Mathura is correctly matched.

S82. Ans.(c)
Sol. Given number- 8367542741
After rearrangement- 7458451832
Sum= 4+8+1+3=16

S83. Ans.(c)
Sol. I. U>A (False)
II. P≤A (False)

S84. Ans.(a)
Sol. I. F>B (True)
II. X<L (False)

S85. Ans.(e)
Sol. I. S≤M (True)
II. Z > W (True)

S86. Ans.(d)
Sol. I. Q ≥ W (False)
II. X>V (False)

S87. Ans.(e)
Sol. I. X ≥B (True)
II. T<J (True)

S88. Ans.(a)
Sol. 1st, 3rd, 6th, and 8th letter from the left end of the word – R, O, A and E respectively
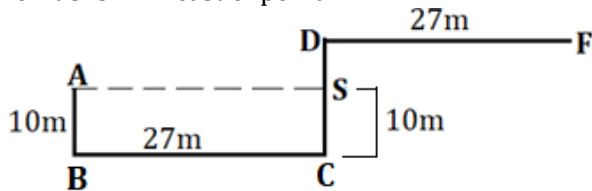One meaningful word is formed – AERO, so 3rd letter is R.

S89. Ans.(b)
Sol.
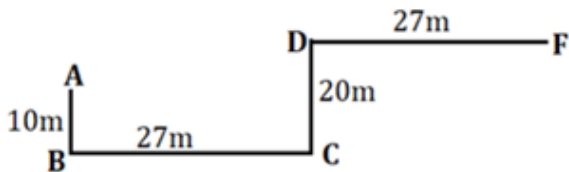
The person's final point is in the south-west of point F.

S90. Ans.(d)
Sol.
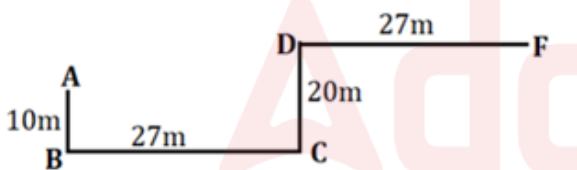
Point S is 27m east of point A.

S91. Ans.(b)
Sol.
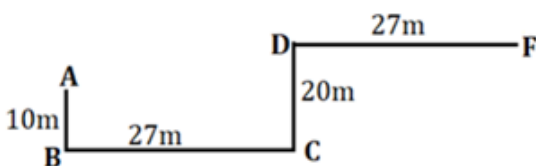
Point B is southwest of point D.

S92. Ans.(c)
Sol. Eight persons sit between P and M who sits immediate left of R. A sits 2nd to the left of M.
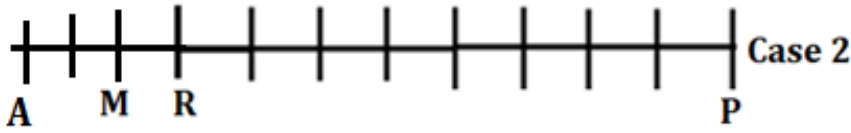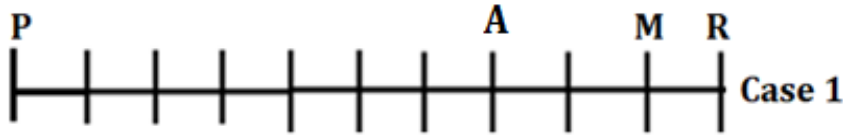
D is the only neighbour of P. One person sits between M and Z. The Number of persons sit between P and W is thrice than the number of persons sit between A and Z, so case 1 is cancelled here: -
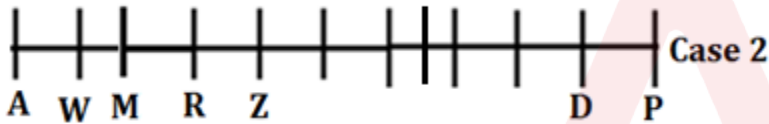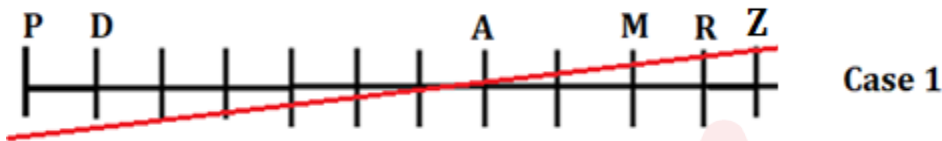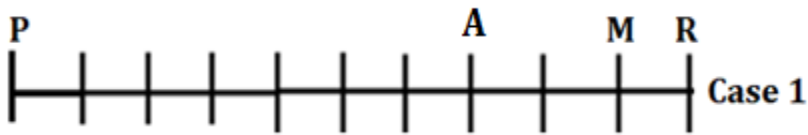

The number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A. Thus, the final arrangement is: -
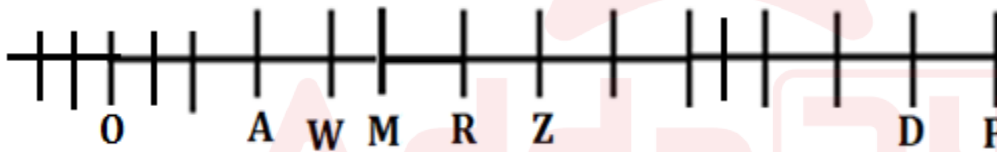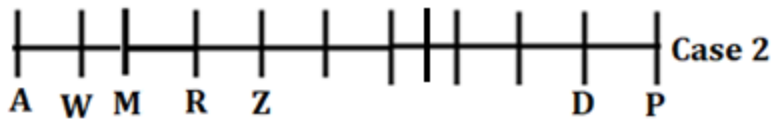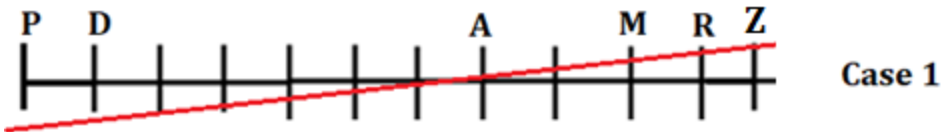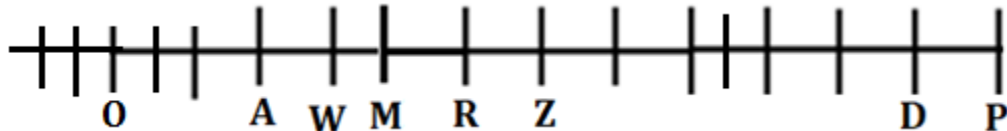

17 persons sit in the row.

S93. Ans.(e)
Sol. Eight persons sit between P and M who sits immediate left of R. A sits 2nd to the left of M.
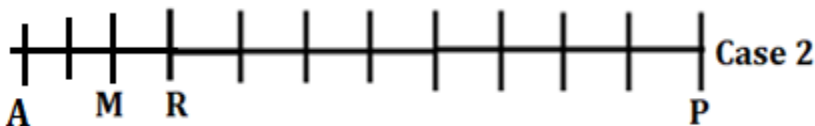
D is the only neighbour of P. One person sits between M and Z. The Number of persons sit between P and W is thrice than the number of persons sit between A and Z, so case 1 is cancelled here: -
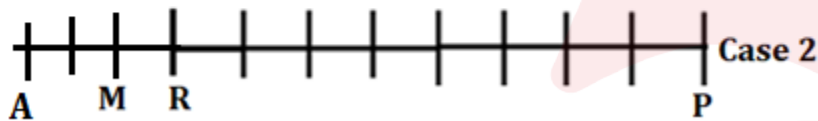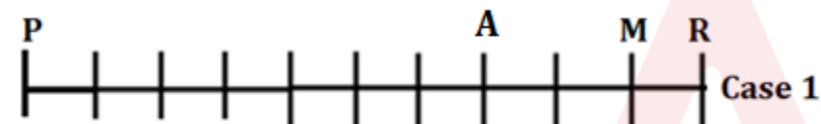
The number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A. Thus, the final arrangement is: -
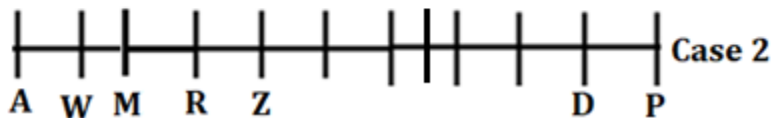

Unknown persons sit 3rd to the right of R.
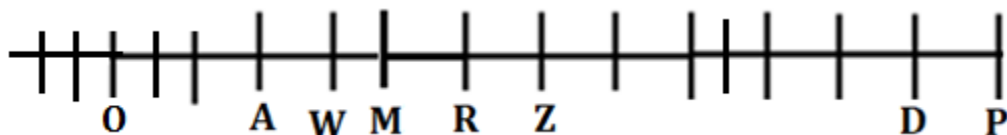
S94. Ans.(a)
Sol. Eight persons sit between P and M who sits immediate left of R. A sits 2nd to the left of M.

D is the only neighbour of P. One person sits between M and Z. The Number of persons sit between P and W is thrice than the number of persons sit between A and Z, so case 1 is cancelled here: -

The number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A. Thus, the final arrangement is: -

Three persons sit between W and O.

S95. Ans.(b)
Sol. Eight persons sit between P and M who sits immediate left of R. A sits 2nd to the left of M.

D is the only neighbour of P. One person sits between M and Z. The Number of persons sit between P and W is thrice than the number of persons sit between A and Z, so case 1 is cancelled here: -
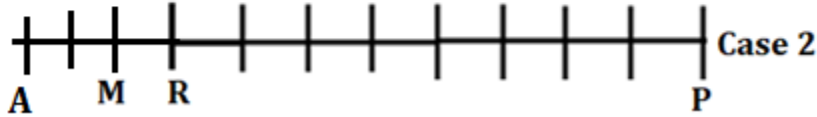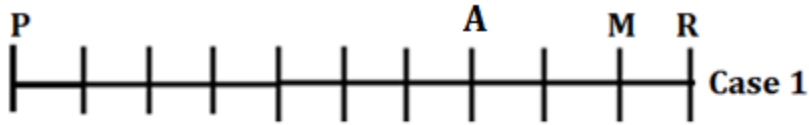

The number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A. Thus, the final arrangement is: -
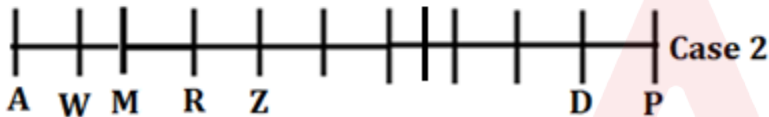

Ten persons will sit between K and D, if W sits 2nd to the right of K.

S96. Ans.(e)
Sol. Eight persons sit between P and M who sits immediate left of R. A sits 2nd to the left of M.

D is the only neighbour of P. One person sits between M and Z. The Number of persons sit between P and W is thrice than the number of persons sit between A and Z, so case 1 is cancelled here: -

Case 1

Case 2

The number of persons sit to the right of Z is two less than the number of persons sit to the left of Z. O sits third to the left of A. Thus, the final arrangement is: -
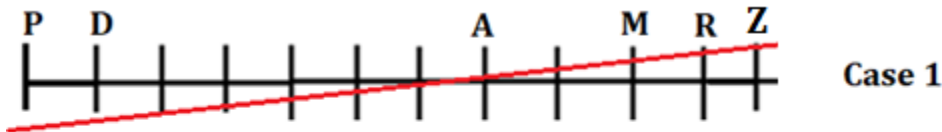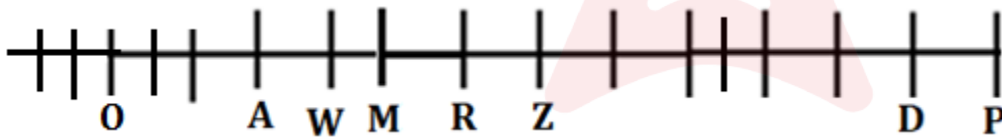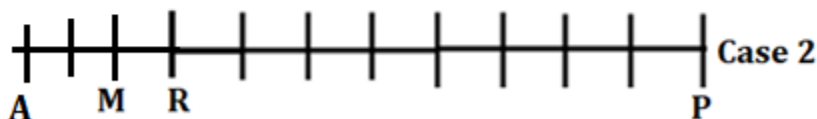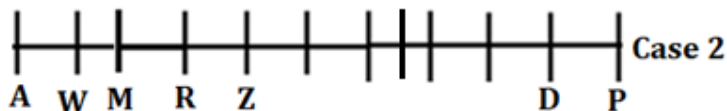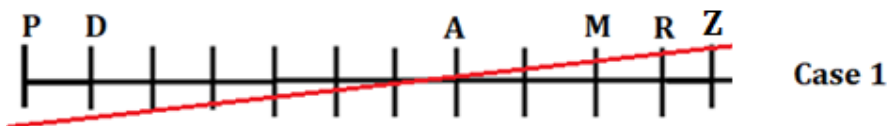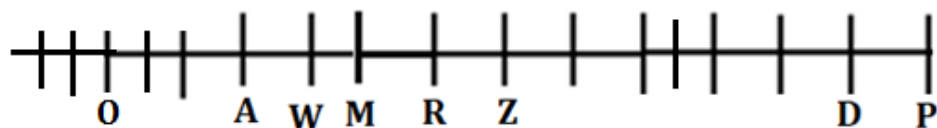

The number of persons sits between A and P is twice the number of persons sit between O and R.

S97. Ans.(b)
Sol. The difference between the ages of G and K is 3. F is 7 years older than K. Here we have 2 possible cases.

Year	Age	Case 1 Persons	Case 2 Persons
1985	37		
1992	30		
1994	28	F	F
1998	24		G
1999	23		
2001	21	K	K
2004	18	G	

The number of persons who were born between F and G is same as the number of persons who were born between S and D. The number of persons who were born after S is same as the number of persons who were born before L. Here case 1 is ruled out now.

Year	Age	~~Case 1 Persons~~	Case 2 Persons
1985	37	~~S/D~~	S
1992	30		D
1994	28	~~F~~	F
1998	24		G
1999	23	~~D/S~~	
2001	21	~~K~~	K
2004	18	~~G~~	L

H is not the oldest among all. So, the final arrangement is-

Year	Age	Persons
1985	37	S
1992	30	D
1994	28	F
1998	24	G
1999	23	H
2001	21	K
2004	18	L

difference between the ages of L (18) and F (28) = 28 – 18 = 10 years

S98. Ans.(e)
Sol. The difference between the ages of G and K is 3. F is 7 years older than K. Here we have 2 possible cases.

Year	Age	Case 1 Persons	Case 2 Persons
1985	37		
1992	30		
1994	28	F	F
1998	24		G
1999	23		
2001	21	K	K
2004	18	G	

The number of persons who were born between F and G is same as the number of persons who were born between S and D. The number of persons who were born after S is same as the number of persons who were born before L. Here case 1 is ruled out now.

Year	Age	~~Case 1~~ ~~Persons~~	Case 2 Persons
1985	37	~~S/D~~	S
1992	30		D
1994	28	~~F~~	F
1998	24		G
1999	23	~~D/S~~	
2001	21	~~K~~	K
2004	18	~~G~~	L

H is not the oldest among all. So, the final arrangement is-

Year	Age	Persons
1985	37	S
1992	30	D
1994	28	F
1998	24	G
1999	23	H
2001	21	K
2004	18	L

4 persons are older than H

S99. Ans.(a)
Sol. The difference between the ages of G and K is 3. F is 7 years older than K. Here we have 2 possible cases.

Year	Age	Case 1 Persons	Case 2 Persons
1985	37		
1992	30		
1994	28	F	F
1998	24		G
1999	23		
2001	21	K	K
2004	18	G	

The number of persons who were born between F and G is same as the number of persons who were born between S and D. The number of persons who were born after S is same as the number of persons who were born before L. Here case 1 is ruled out now.

Year	Age	~~Case 1~~ ~~Persons~~	Case 2 Persons
1985	37	~~S/D~~	S
1992	30		D
1994	28	~~F~~	F
1998	24		G
1999	23	~~D/S~~	
2001	21	~~K~~	K
2004	18	~~G~~	L

H is not the oldest among all. So, the final arrangement is-

Year	Age	Persons
1985	37	S
1992	30	D
1994	28	F
1998	24	G
1999	23	H
2001	21	K
2004	18	L

F was born in 1994

S100. Ans.(a)
Sol. The difference between the ages of G and K is 3. F is 7 years older than K. Here we have 2 possible cases.

Year	Age	Case 1 Persons	Case 2 Persons
1985	37		
1992	30		
1994	28	F	F
1998	24		G
1999	23		
2001	21	K	K
2004	18	G	

The number of persons who were born between F and G is same as the number of persons who were born between S and D. The number of persons who were born after S is same as the number of persons who were born before L. Here case 1 is ruled out now.

Year	Age	~~Case 1~~ ~~Persons~~	Case 2 Persons
1985	37	~~S/D~~	S
1992	30		D
1994	28	~~F~~	F
1998	24		G
1999	23	~~D/S~~	
2001	21	~~K~~	K
2004	18	~~G~~	L

H is not the oldest among all. So, the final arrangement is-

Year	Age	Persons
1985	37	S
1992	30	D
1994	28	F
1998	24	G
1999	23	H
2001	21	K
2004	18	L

The number of persons who were born between G and K is half than the number of persons who were born between H and D