



RRB SECTION CONTROLLER

DATA INTERPRETATION

Bar Graph, Line Graph, Pie Chart, Tables, Scatter Plot,
Venn Diagram and Statistical Curve Distribution

ENGLISH

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BY SAHIL SIR**

Based on Latest Pattern



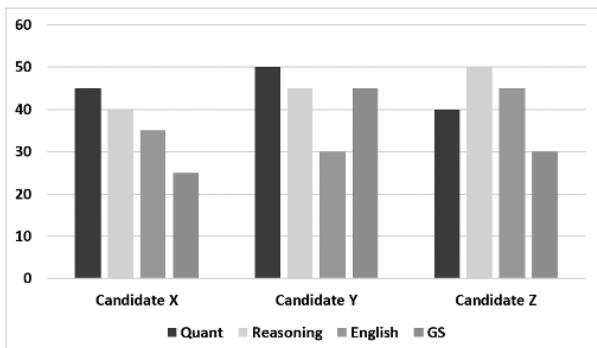
**Quick Tricks
By Sahil Sir**

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BAR GRAPH

Direction (1-5): The bar graph below shows the marks of 3 candidates X, Y, and Z in the CET exam in 4 different sections Quant, Reasoning, English, and GS. Study the graph carefully and answer the questions that follow. The maximum mark in a section is 50.



Q:1 Find the ratio of the average marks scored by all three candidates in Reasoning and that in GS.

1. 27 : 20 2. 25 : 19
3. 23 : 20 4. 27 : 17

Q:2 How many more marks should candidate Z score such that his percentage marks in the exam would become 88%?

1. 13 2. 11
3. 10 4. 15

Q:3 What is the difference of percentage marks obtained by candidate X and candidate Y in the exam?

1. 17.5% 2. 15%
3. 12.5% 4. 10%

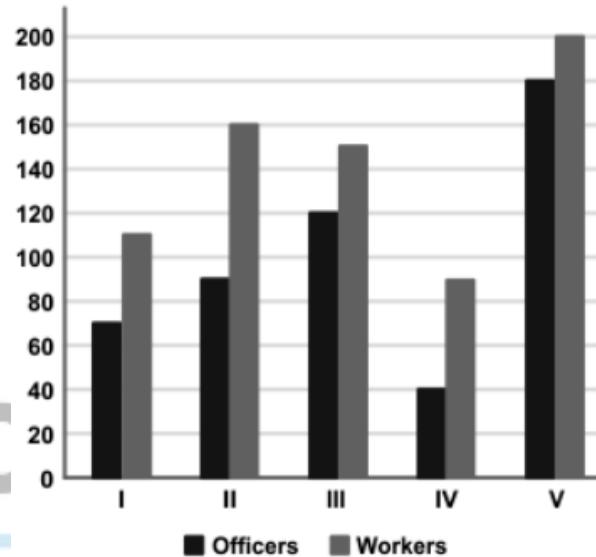
Q:4 Find the percentage marks of 3 candidates in English.

1. 67.66% 2. 72.5%
3. 82.33% 4. 73.33%

Q:5 Another candidate W scored 83.5% in the exam. If his marks in Quant and Reasoning were the same as Y and the ratio of marks in GS and English was 3 : 5 then, find the marks of W in GS.

1. 33 2. 24
3. 30 4. 27

Directions (6-10): Given bar graph shows the number of officers and workers of a company in five different departments.



Q:6 Find the difference between total workers and total officers in all five departments.

1. 170 2. 260
3. 210 4. 300

Q:7 Find the average number of workers in five departments.

1. 142 2. 138
3. 150 4. 164

Q:8 The number of officers in department I is approximately what percent more than number of the officers in department IV?

1. 80% 2. 66.66%
3. 32% 4. 75%

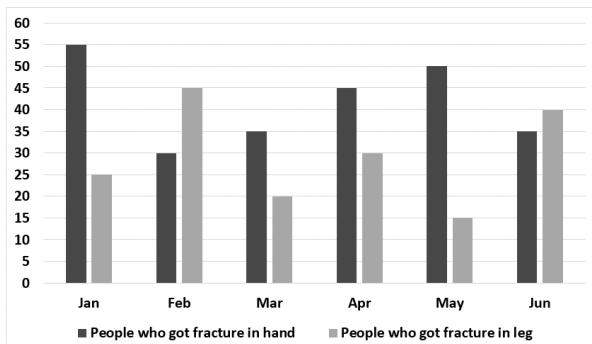
Q:9 Find the ratio between officers and workers in department IV.

1. 9 : 10 2. 4 : 5
3. 9 : 16 4. 4 : 9

Q:10 If the number of officers in department III increased by 20% and 50% of the workers in department II got the promotion and started working in department III as an officer. Now, find the total number of officers in department III.

1. 234 2. 224
3. 240 4. 120

Direction (10-15): The bar graph given below shows the number of people who got fractures in their hand and leg in different months due to road accidents.



Q:11 What is the average number of people who fractured the leg in the first five months?

1. 32 2. 27
3. 43 4. 36

Q:12 What is the sum of difference between persons who got fracture in the hand and leg in Feb and May?

1. 48 2. 45
3. 50 4. 54

Q:13 What is the ratio of persons who got fracture in their hand and leg together in March to those who got fracture in hand and leg in June?

1. 3 : 7 2. 15 : 19
3. 7 : 11 4. 11 : 15

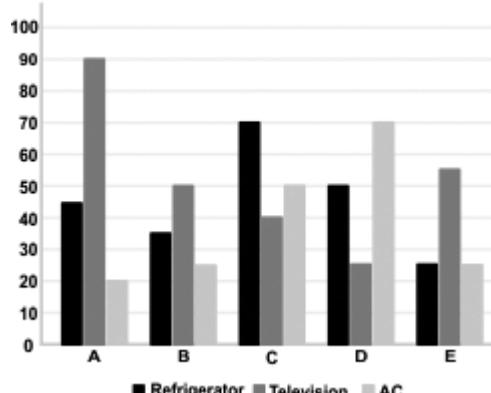
Q:14 People who got fracture in their hand in Feb and Apr together is what percent more than people who got fracture in their leg in Feb and May together?

1. 35% 2. 20%
3. 15% 4. 25%

Q:15 How many people got fracture in their hands in Jan, Mar, and Jun together?

1. 120 2. 125
3. 140 4. 150

Direction (16-20): The bar graph below shows the electricity units consumed by Refrigerator, television and AC in five households A, B, C, D and E. Study the graph carefully and answer the questions. (All the values are in multiple of 5)



Q:16 What is the difference of total electricity units consumed by refrigerator and total electricity units consumed by AC in all 5 households?

1. 40 units 2. 35 units
3. 32 units 4. 30 units

Q:17 What is the average number of electricity units consumed by Television in 5 households?

1. 51 units 2. 48 units
3. 50 units 4. 52 units

Q:18 Total electricity units consumed by AC in households A and D is how much percentage more/less than total electricity units consumed by Television in households D and E?

1. 15% 2. 10.5%
3. 12.5% 4. 18%

Q:19 If the electricity units consumed by Refrigerator in household F is 20% more than that consumed in household E then find the average of electricity units consumed by Refrigerator in households B, E and F.

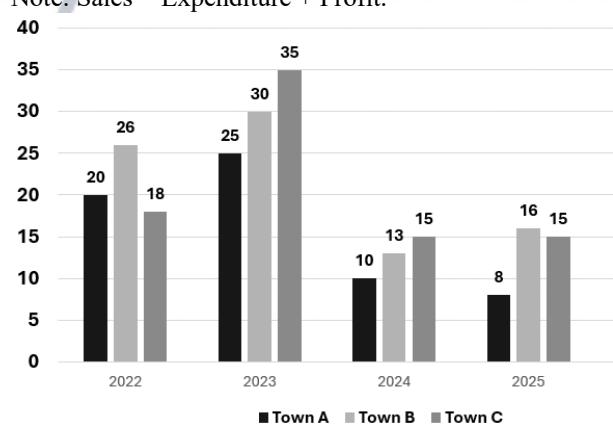
1. 30 units 2. 32 units
3. 35 units 4. 40 units

Q:20 In which household the maximum units of electricity are consumed by all 3 appliances together?

1. A 2. E
3. B 4. C

Directions (21-25): Bar graph given below shows the sales of three shopkeepers (in thousands) for 4 years (2022 - 2025). Read the data given in the bar graph carefully and answer the question that follows.

Note: Sales = Expenditure + Profit.



Q:21 Find the ratio of total sales of A to total sales of C over the years.

1. 83 : 53 2. 52 : 83
3. 53 : 89 4. None of these

Q:22 In 2024, ratio of profit percent of A, B and C was 5 : 6 : 4. If expenditure of A is Rs 8000, find the total expenditure of B and C.

1. Rs 22500 2. Rs 25450
3. Rs 21200 4. Rs 23200

Q:23 The expected sales of all three shopkeepers combined in year 2025 was Rs 39560. Due to an accident B had to close his shop for some days and he could not meet his given target. By what percent has B missed his target?

- 1. 11.11%
- 2. 13%
- 3. 10.71%
- 4. 9.85%

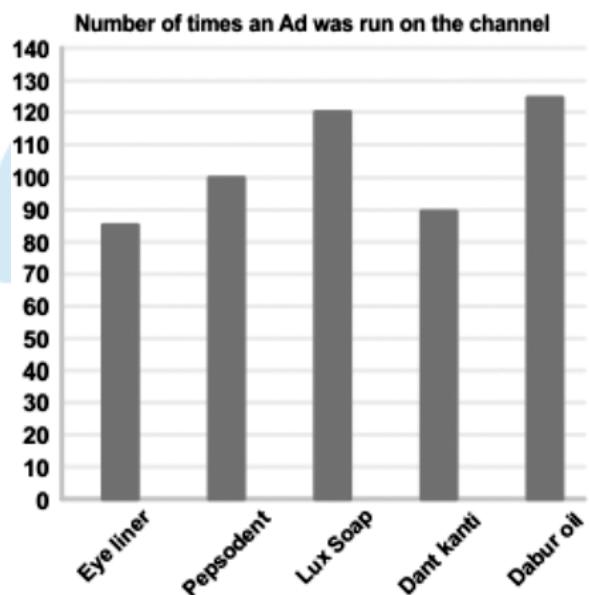
Q:24 In the year 2024, a total of 6250 articles were sold. Of these A sells at Rs 10 per piece, B sells at Rs 15 per piece and the rest is sold by C at Rs x per piece. Find the value of x.

- 1. Rs 15
- 2. Rs 20
- 3. Rs 16
- 4. Rs 25

Q:25 If the profit percent of A in year 2026 is 20%, find his expenditure in the same year.

- 1. Rs 9600
- 2. Rs 6666.67
- 3. Rs 8500
- 4. Rs 6400

Directions (26-30): The following bar graph shows different advertisements shown the number of times on a TV channel named Star Plus in a week.



Refer the data given and answer the following question.

Q:26 The total number of times advertisements of Eye Liner and Pepsodent were shown is what percent of the total number of advertisements of Lux Soap, Dant Kanti, and Dabur Oil shown? (Considering that only the advertisements mentioned in the bar diagram are shown)

- 1. 55%
- 2. 54.22%
- 3. 55.22%
- 4. 59.22%

Q:27 What is the ratio between the advertisement which is shown for the 3rd highest time and the sum of all the other advertisements?

- 1. 21: 5
- 2. 26 : 7
- 3. 7 : 26
- 4. 5 : 21

Q:28 Number of times the advertisement of Dant kanti shown is what percent of the total number of times all other advertisements are shown? (approx.)

- 1. 20%
- 2. 22%
- 3. 19%
- 4. 21%

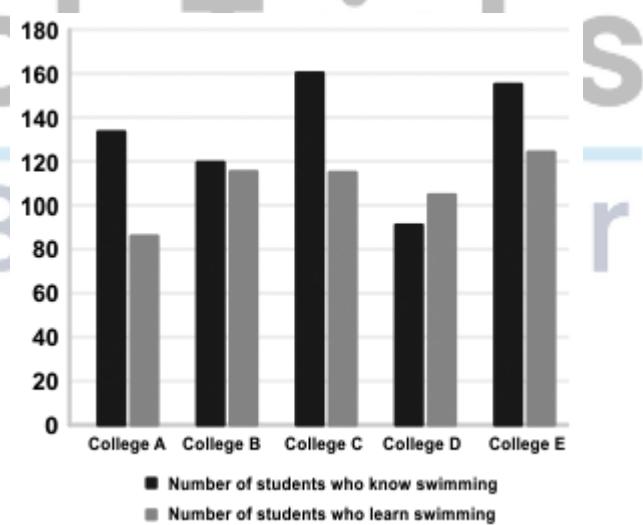
Q:29 If the Lux soap advertisement is shown every alternate hour, then how many times more or less should this advertisement be shown on the TV channel in a week to match the actual number given in the diagram?

- 1. 36 more
- 2. 36 less
- 3. 35 more
- 4. 35 less

Q:30 What is the average number of advertisements shown in a week by Star Plus? (considering that only the ads mentioned in the graph are shown)

- 1. 105
- 2. 104
- 3. 110
- 4. 109

Direction (31-35): The bar graph below shows the number of students in 5 colleges who know swimming and those who learn swimming. Study the graph carefully and answer the questions that follow. (All the numbers mentioned are in the multiples of 5)



Q:31 There is a total of 450 students in College A. Next month, some students who are learning swimming moved to the group of students who know swimming. If the percentage of students who know swimming in college A becomes 40%, then find the number of students left in college A who will learn swimming next month.

- 1. 30
- 2. 40
- 3. 50
- 4. 35

Q:32 In college E, 25 more students started learning swimming and so the percentage of total students who learned swimming in college E becomes 37.5%. Find the total number of students in college E.

- 1. 300
- 2. 350
- 3. 500
- 4. 400

Q:33 If the average number of students in colleges A, B, C, D, E, and F who learn swimming is 110 then, find the number of students in college F who learn swimming.

- 1. 115
- 2. 125
- 3. 120
- 4. 130

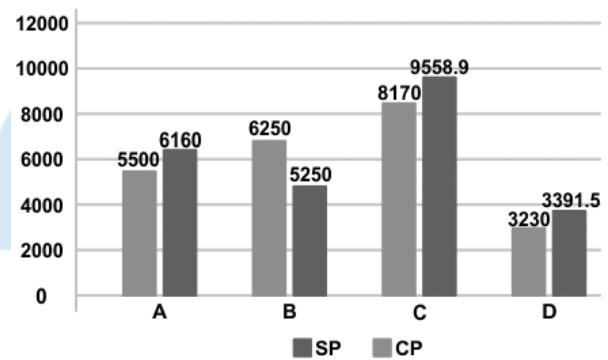
Q:34 The total number of students who know swimming in colleges A and E together is what percent of the total number of students who learn swimming in colleges C and D together? (Approx.)

- 1. 132%
- 2. 155%
- 3. 150%
- 4. 130%

Q:35 The total number of students in College B is 424. How many students neither know swimming nor learn swimming in college B?

- 1. 192
- 2. 198
- 3. 189
- 4. 184

Directions (36-40): The bar graph given below gives the Cost price and Selling price of four articles (A, B, C, D). Read the data carefully and answer the question that follows.



Q:36 At what price more than the given Selling price, product B must be sold so that there is a profit of 2% on the trade?

- 1. Rs 1125
- 2. Rs 1075
- 3. Rs 1175
- 4. Rs 1185

Q:37 Another shopkeeper sells article A by giving a 20% discount and still earns half the profit that was earned, find the Marked price of article A.

- 1. Rs 7254.5
- 2. Rs 7085.5
- 3. Rs 7155.5
- 4. Rs 7287.5

Q:38 Find the loss percent on selling article B.

- 1. 8.5%
- 2. 9%
- 3. 9.5%
- 4. 16%

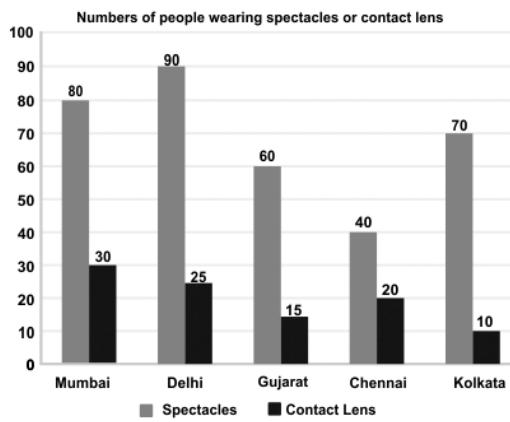
Q:39 Find the average of profit percent obtained on selling article C and D.

- 1. 9%
- 2. 10%
- 3. 11%
- 4. 12%

Q:40 Combined cost price of A and B is approximately what percent of combined selling price of A and B?

- 1. 105%
- 2. 95%
- 3. 104%
- 4. 103%

Direction (41-45): The following bar graph shows the number of people (in thousands) who wears spectacles and contact lenses in different cities.



Refer the data given and answer the following question.

Q:41 Number of people wearing spectacles in Kolkata is what percent of the total number of people wearing spectacles in Mumbai, Delhi and Gujarat?

- 1. 32.47%
- 2. 30.43%
- 3. 37.43%
- 4. 31.43%

Q:42 If the number of people wearing contact lenses in Delhi and Chennai is interchanged by the number of people wearing glasses in the same city. Find the ratio of the total number of people wearing glasses to the total number of people wearing contact lenses in all the cities together.

- 1. 51 : 38
- 2. 51 : 32
- 3. 51 : 37
- 4. 37 : 51

Q:43 If 20%, 30%, and 40% of the number of people wearing spectacles in Mumbai, Gujarat, and Chennai respectively purchase spectacles from lenskart. Find the average of the number of people purchasing spectacles from LensKart in the given cities. (approx.)

- 1. 16667
- 2. 16666
- 3. 16669
- 4. 15667

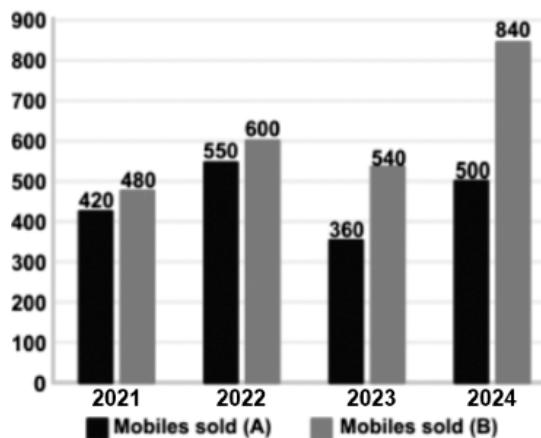
Q:44 The number of people wearing spectacles in Chennai is what percent of the total number of people wearing contact lenses in all the cities?

- 1. 46%
- 2. 45 %
- 3. 42%
- 4. 40%

Q:45 What is the average of the number of people wearing spectacles in all the cities combined?

- 1. 60000
- 2. 68000
- 3. 61000
- 4. 65000

Directions (46-50): The bar graph in the given questions contains the number of mobiles sold by 2 companies A and B in four years (2021 - 2024). Answer the questions on the basis of the details given in the bar graph.



Q:46 If the total sale (in Rs) of company A in 2024 is Rs 1600000 and the cost of 1 mobile of B is 25% less than one mobile of A in the same year, what is the sale (in lakh rupees) of B?

1. 19.96
2. 20.12
3. 19.88
4. 20.16

Q:47 Find the difference between the average sales of both A and B over the years.

1. 156.5
2. 157.5
3. 158.5
4. 159.5

Q:48 Total mobiles sold in 2024 is what percent more/less than mobiles sold by B in the year 2022?

1. 124.67
2. 125.33
3. 119.67
4. none of these

Q:49 Mobiles sold by A in 2023 is what percent of the total number of mobiles sold in 2021?

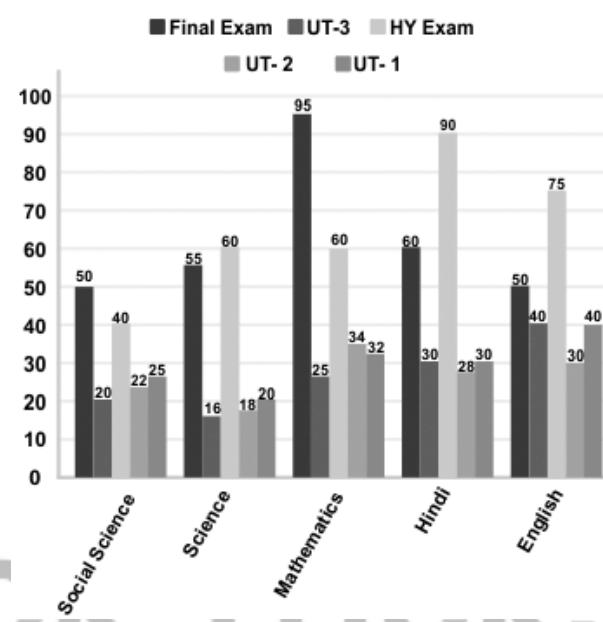
1. 25
2. 30
3. 40
4. 45

Q:50 The number of mobiles sold in the year 2020 by Company A is 20% more than its sales in the year 2021 and the number of mobiles sold in the year 2020 by Company B 25% more than its sales in the year 2022. What is the average of mobiles sold in 2020?

1. 617
2. 608
3. 596
4. 627

Directions (51-55): Read the data given below carefully and answer the questions that follow.

Rajesh has to go through 5 exams of 5 subjects in a year to clear Class 9. The question paper of UT (Unit Tests) is of 50 marks and that of HY (half-yearly) and finals are of 100 marks each. The cut-off mark for him to clear the exams is 50% of the total marks.



Q:51 What is the ratio of the total marks scored by Rajesh in all his UTs and final exams together to the total marks of all question papers in all 5 exams?

1. 97 : 186
2. 123 : 289
3. 237 : 119
4. 72 : 175

Q:52 If Rajesh had scored 6 and 10 marks less in English and Hindi respectively and 12, 28, and 20 marks more in Mathematics, Science, and Social science respectively overall, then what would be the percentage change in the overall percentage of Rajesh?

1. 5.67%
2. 4.22%
3. 3.23%
4. 4.27%

Q:53 Total marks Rajesh obtained in all UT's are what percent less than the total marks obtained by him in his half-yearly and final exams?

1. 28.57%
2. 30.26%
3. 32.76%
4. 35.43%

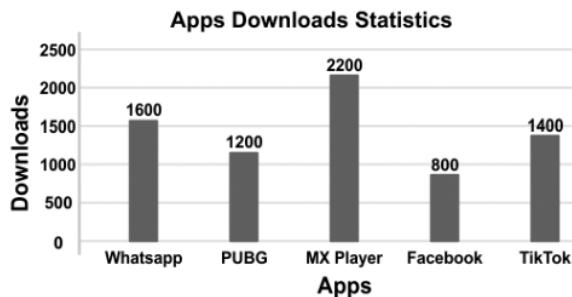
Q:54 What is the total overall percentage of Rajesh?

1. 60.55%
2. 55.45%
3. 59.71%
4. 62.34%

Q:55 What is the count of total subjects in which Rajesh failed, adding up the results of all the exams?

1. 1
2. 2
3. 3
4. 4

Directions (56-60): The following bar graph tells about the number of different apps downloaded last month. Read the graph and answer accordingly.



Q:56 The average user rating of Facebook by all people who downloaded it last month was 4.1 stars and same for TikTok was 2.3 stars. What was the average rating given to the other 3 apps by the users if the combined average rating of all 5 apps was 3.8 stars?

1. 3.96 stars
2. 4.08 stars
3. 4.04 stars
4. 4.17 stars

Q:57 If Whatsapp and Facebook are categorised as Social Apps, PUBG and TikTok as Entertainment Apps and rest as Video Streaming apps, the number of downloads of Entertainment Apps is what per cent of number of Social and Video Streaming apps downloads combined?

1. 53.24%
2. 47.64%
3. 42.35%
4. 56.52%

Q:58 This Month, 40% of users of PUBG app uninstalled it and were replaced with Whatsapp and Facebook users in the ratio 7 : 5. What would be the ratio of MX Player downloads last month to increased Facebook users this month?

1. 9 : 5
2. 10 : 7
3. 11 : 5
4. 9 : 4

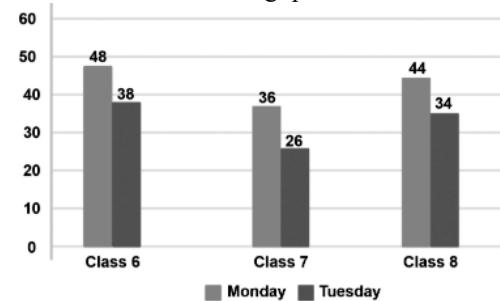
Q:59 If TikTok and PUBG are considered as Chinese apps, 20% of the users who downloaded Chinese apps last month, uninstalled them. What is the ratio of the number of current Chinese app users to the total downloads of other apps in the last month?

1. 52 : 115
2. 47 : 107
3. 59 : 113
4. 49 : 103

Q:60 The average number of downloads of all the apps is how much per cent more than the number of Facebook App downloads?

1. 75%
2. 80%
3. 65%
4. 70%

Directions (61-65): Given bar graph shows the data of number of students present in 3 classes 6, 7 and 8 on 2 days: Monday and Tuesday. Study the chart carefully and answer the following questions.



Q:61 What is the average number of students present on Monday in Class 7th and 8th together?

1. 40
2. 70
3. 30
4. 45

Q:62 By what percent, the number of students present in class 6th on Monday is more than the number of students present in class 7th on Tuesday?

1. 48.6%
2. 102.8%
3. 84.61%
4. 82.2%

Q:63 What is the ratio of total students present in 3 classes on Monday and those on Tuesday?

1. 54 : 39
2. 4 : 3
3. 7 : 5
4. 64 : 49

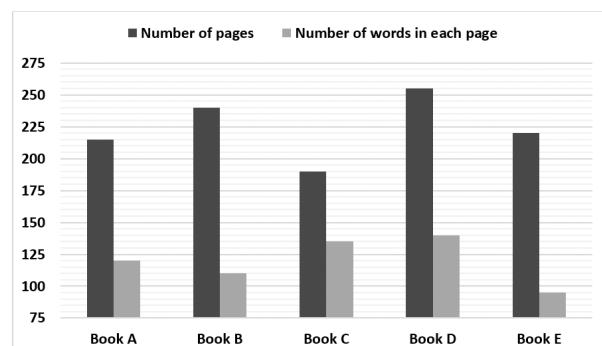
Q:64 What is the difference of average number of students present in Class 6th and 8th in 2 days?

1. 5
2. 6
3. 3
4. 4

Q:65 By what percent, the number of students present in class 7th on Monday is less than the number of students present in class 8th in 2 days together?

1. 81.1%
2. 116.67%
3. 53.8%
4. 112.23%

Direction (66-70): The bar graph below shows the number of pages and the number of words in each page in 5 different books (A, B, C, D and E). Study the graph carefully and answer the questions that follow.



Q:66 The total number of words in 25% of book B is what percentage of the total number of words in $\frac{1}{3}$ of book D?

- 1. 52.66%
- 2. 58.96%
- 3. 57.33%
- 4. 55.46%

Q:67 Harish reads 8 pages of book A and 4 pages of book E every day. Find the total number of words read by him in a week.

- 1. 9380
- 2. 9540
- 3. 9430
- 4. 9260

Q:68 Arun reads 'x' words from book C each day and completes the book in 16 weeks & 2 days. Find the value of x.

- 1. 180
- 2. 225
- 3. 270
- 4. 135

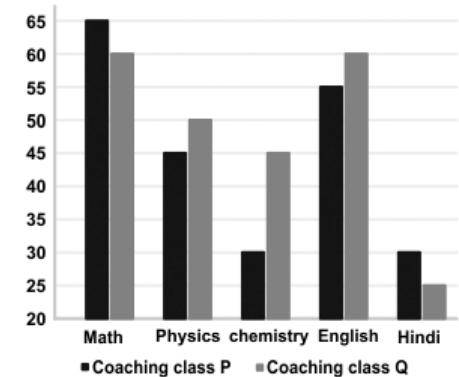
Q:69 The average number of pages in all 5 books is approximately how much percentage more than the number of pages in book C?

- 1. 16.5%
- 2. 20%
- 3. 18%
- 4. 15%

Q:70 Find the ratio of the total number of words in Books A and D and the total number of words in books B and E.

- 1. 635 : 493
- 2. 590 : 443
- 3. 615 : 473
- 4. 65 : 49

Direction (72-75): The bar graph below shows the number of students studying different subjects (Maths, Physics, Chemistry, English, and Hindi) in 2 coaching classes P and Q. Study the graph carefully and answer the question that follows.



Q:71 How many more students should be added to the Math class of coaching Q such that the ratio of total students in Math and Chemistry to the total students in Physics and Hindi in coaching Q becomes 8 : 5?

- 1. 5
- 2. 10
- 3. 15
- 4. 20

Q:72 The number of students studying Chemistry in coaching P increased by 30% and the number of students studying English in coaching P decreased by 20%. Find the total number of students in coaching P now.

- 1. 228
- 2. 212
- 3. 218
- 4. 223

Q:73 What is the ratio of the total number of students studying Physics and Hindi in coaching P to the total number of students studying English and Hindi in coaching Q?

- 1. 13 : 17
- 2. 15 : 19
- 3. 11 : 13
- 4. 15 : 17

Q:74 Find the difference in the average number of students studying different subjects in coaching Q and P.

- 1. 3
- 2. 4
- 3. 5
- 4. 2

Q:75 Total number of students studying Physics and Chemistry in coaching Q is what percent of total number of students studying English and Math in coaching P?

- 1. 81.33%
- 2. 79.16%
- 3. 77.54%
- 4. 78.12%

Answer Key

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

Answers and Solutions

Q:1 The correct answer is **option 1** i.e. 27 : 20.

From the bar graph:

Average marks scored by all three candidates in Reasoning

$$\Rightarrow [40 + 45 + 50]/3 = 135/3$$

And,

Average marks scored by all three candidates in GS

$$\Rightarrow [25 + 45 + 30]/3 = 100/3$$

Hence,

$$\text{Required ratio} = 135/3 : 100/3 = 27 : 20$$

Q:2 The correct answer is **option 2** i.e. 11.

Maximum marks of exam = $50 \times 4 = 200$

Total marks obtained by candidate Z

$$\Rightarrow [40 + 50 + 45 + 30] = 165$$

For 88%, marks = $200 \times 0.88 = 176$

Hence,

$$\text{Required marks} = (176 - 165) = 11$$

Q:3 The correct answer is **option 3** i.e. **12.5%**.

Maximum marks of exam = $50 \times 4 = 200$

Percentage marks obtained by Candidate X

$$\Rightarrow [45 + 40 + 35 + 25]/200 \times 100 = 72.5\%$$

And

Percentage marks obtained by Candidate Y

$$\Rightarrow [50 + 45 + 30 + 45]/200 \times 100 = 85\%$$

Hence, Required difference = $(85 - 72.5) = 12.5\%$

Q:4 The correct answer is **option 4** i.e. **73.33%**.

Marks of 3 candidates in English

$$\Rightarrow [35 + 30 + 45] = 110$$

Hence,

$$\text{Required percentage} = [(110)/150] \times 100 = 73.33\%$$

Q:5 The correct answer is **option 4** i.e. **27**.

Maximum marks of exam = $50 \times 4 = 200$

So, Total marks of W = $200 \times 0.835 = 167$

His marks in Quant and Reasoning were the same as Y;

So,

Total marks of W in GS and English

$$= 167 - 50 - 45 = 72$$

So, Marks of W in GS = $72 \times 3/8 = 27$

Q:6 The correct answer is **Option 3** i.e. **210**.

Total number of workers in all the departments = $110 + 160 + 150 + 90 + 200$

$$= 710$$

Total number of officers in all the departments = $70 + 90 + 120 + 40 + 180 = 500$

$$\text{Required difference} = 710 - 500 = 210$$

Q:7 The correct answer is **option 1** i.e. **142**.

Total number of workers in five departments = $110 + 160 + 150 + 90 + 200$

$$= 710$$

Required average = number of workers/number of departments

$$= 710/5 = 142$$

Q:8 The correct answer is **Option 4** i.e. **75%**.

Number of officers in department I = 70

Number of officers in department IV = 40

Required percentage = $[(70 - 40)/40] \times 100$

$$= 3/4 \times 100 = 75\%$$

Q:9 The correct answer is **Option 4** i.e. **4 : 9**.

Number of officers in department IV = 40

Number of workers in department IV = 90

Required ratio = $40 : 90 = 4 : 9$

Q:10 The correct answer is **option 2** i.e. **224**.

Number of officers in department III = 120

After 20% increase in the number of officers in department III = $120 \times 1.2 = 144$

Number of workers in department II = 160

50% of the workers in department II got promotion = $160 \times 0.5 = 80$

Now, required number of officers in department III = $144 + 80 = 224$

Q:11 The correct answer is **option 2** i.e. **27**.

Sum of persons who got fracture in their leg on first five months = $25 + 45 + 20 + 30 + 15 = 135$

Required average = $135/5 = 27$

Q:12 The correct answer is **option 3** i.e. **50**.

Difference between persons who got fracture in the hand and leg in Feb = $45 - 30 = 15$

Difference between persons who got fracture in the hand and leg in May = $50 - 15 = 35$

Required sum = $15 + 35 = 50$

Q:13 The correct answer is **option 4** i.e. **11 : 15**.

Persons who got fracture in their hand and leg together in Mar = $35 + 20 = 55$

Persons who got fracture in their hand and leg together in Jun = $35 + 40 = 75$

Required ratio = $55 : 75 = 11 : 15$

Q:14 The correct answer is **option 4** i.e. **25%**.

Persons who got fracture in their hand in Feb and Apr together = $30 + 45 = 75$

Persons who got fracture in their leg in Feb and May together = $45 + 15 = 60$

Required percent = $[(75 - 60)/60] \times 100 = 25\%$

Q:15 The correct answer is **option 2** i.e. **125**.

People who got fracture in their hands in Jan = 55

People who got fracture in their hands in Mar = 35

People who got fracture in their hands in Jun = 35

Required number of people = $55 + 35 + 35 = 125$

Q:16 The correct answer is **option 2** i.e. **35 units**.

Total electricity units consumed by refrigerator in all 5 households

$$= [45 + 35 + 70 + 50 + 25] = 225 \text{ units}$$

And

Total electricity units consumed by AC in all 5 households

$$= [20 + 25 + 50 + 70 + 25] = 190 \text{ units}$$

Hence,

$$\text{Required difference} = 225 - 190 = 35 \text{ units}$$

Q:17 The correct answer is **option 4** i.e. **52 units**.

From the bar graph:

Average number of electricity units consumed by Television in 5 households

= Sum of terms/number of terms

$$= [90 + 50 + 40 + 25 + 55]/5$$

$$= 260/5$$

$$= 52 \text{ units}$$

Q:18 The correct answer is **option 3** i.e. **12.5%**.

From the bar graph:

Total electricity units consumed by AC in households A and D = $20 + 70 = 90$ units

Total electricity units consumed by Television in households D and E = $25 + 55 = 80$ units

So,

$$\text{Required percentage} = [(90 - 80)/80] \times 100 = 12.5\%$$

Q:19 The correct answer is **option 1** i.e. **30 units**.

From the bar graph:

Electricity units consumed by Refrigerator in household
 $E = 25$ units

So,

Electricity units consumed by Refrigerator in household
 $F = 25 \times 1.2 = 30$ units

Electricity units consumed by Refrigerator in household
 $B = 35$ units

So,

Average = Sum of terms/number of terms
 $= (25 + 30 + 35)/3 = 90/3 = 30$ units

Q:20 The correct answer is **option 4** i.e. **C.**

From the bar graph:

Total units of electricity consumed by all 3 appliances together in A = $45 + 90 + 20 = 155$ units

Total units of electricity consumed by all 3 appliances together in B = $35 + 50 + 25 = 110$ units

Total units of electricity consumed by all 3 appliances together in C = $70 + 40 + 50 = 160$ units

Total units of electricity consumed by all 3 appliances together in D = $50 + 25 + 70 = 145$ units

Total units of electricity consumed by all 3 appliances together in E = $25 + 55 + 25 = 105$ units

Hence,

Household C consumed maximum units of electricity.

Q:21 The correct answer is **option 4** i.e. **None of these**

Total sales of A = $20000 + 25000 + 10000 + 8000 = 63000$

Total sales of C = $18000 + 35000 + 15000 + 15000 = 83000$

Ratio = $63000 : 83000 = 63 : 83$

Q:22 The correct answer is **option 1** i.e. **Rs 22500**

Expenditure of A = Rs 8000

Sales of A = Rs 10000

Profit = Sales - Expenditure = $10000 - 8000 = \text{Rs } 2000$

Profit % = $(\text{profit}/\text{expenditure}) \times 100$

Profit % = $(2000/8000) \times 100 = 25\%$

Ratio of profit % = $5 : 6 : 4$

5 units = 25%

Profit % of B = 6 units = 30%

Profit % of C = 4 units = 20%

Sales of B = Rs 13000

$13000 = \text{Expenditure} + 30\% \text{ of Expenditure}$

$13000 = 1.3 \times \text{Expenditure}$

Expenditure of B = Rs 10000

Sales of C = Rs 15000

$\Rightarrow 15000 = C + 20\% \text{ of } C$

$\Rightarrow 1.2C = 15000$

Expenditure of C = Rs 12500

Required sum = $10000 + 12500 = \text{Rs } 22500$

Q:23 The correct answer is **option 3** i.e. **10.71%**

Target sales in the year 2025 = Rs 39560

Sales in 2025 = $\text{Rs}(10000 + 13000 + 15000) = \text{Rs } 38000$

Difference = $\text{Rs } 39560 - \text{Rs } 38000 = \text{Rs } 1560$

B's target sales = $\text{Rs } 13000 + \text{Rs } 1560 = \text{Rs } 14560$

Required percentage = $(1560/14560) \times 100 = 10.71\%$

Q:24 The correct answer is **option 2** i.e. **Rs 20**

Total number of articles sold in 2024 = 6250

Sales of A = Rs 25000

Price of 1 article of A = Rs 10

Number of articles = $25000/10 = 2500$

Sales of B = Rs 30000

Price = Rs 15 per piece

Number of articles = $30000/15 = 2000$

Let number of articles sold by C = c

$c = 6250 - (2000 + 2500) = 1750$

Sales of C = Rs 35000

Price per piece of articles sold by C = x = $35000/1750 = \text{Rs } 20$

Q:25 The correct answer is **option 2** i.e. **Rs 6666.67**

Let the expenditure of A in 2026 = X

Sales = Rs 8000

Profit = 20%

Sales = expenditure + profit

$\Rightarrow 8000 = X + 20\% \text{ of } X$

$\Rightarrow 8000 = 1.2X$

$\Rightarrow X = \text{Rs } 6666.67$

Q:26 The correct answer is **Option 3** i.e. **55.22%**.

The total number of times the advertisements of Eyeliner and pepsodent are shown = $85 + 100 = 185$.

The total number of times the advertisements of Lux Soap, Dant Kanti, and Dabur oil are shown = $120 + 90 + 125 = 335$.

Required percentage = $(185/335) \times 100 = 55.22\%$

Q:27 The correct answer is **Option 4** i.e. **5 : 21**.

The advertisement shown for the third highest number of times is of pepsodent i.e. 100 times

The total number of times all other ads are shown = $85 + 120 + 90 + 125 = 420$.

Ratio = $100/420 = 5 : 21$

Q:28 The correct answer is **Option 4** i.e. **21%**.

The number of times the advertisement of Dant Kanti is shown = 90 times.

The total number of times all other advertisements are shown = $85 + 100 + 120 + 125 = 430$.

Percentage = $(90/430) \times 100 = 20.93\% = 21\% \text{ (approx)}$

Q:29 The correct answer is **Option 1** i.e. **36 more**.

As there are 24 hrs in a day and according to the question the advertisement is shown in every alternate hour.

The number of times an advertisement is shown in a day = $24/2 = 12$ times

So, the number of times the ad is shown in a week = $12 \times 7 = 84$ times

According to the bar graph, the ad is shown 120 times.

So, $120 - 84 = 36$

Hence the ad must be shown 36 times more to match the actual number as mentioned in the bar graph

Q:30 The correct answer is **Option 2** i.e. **104**.

Average = Sum of the observations/total observations

Average number of advertisements shown by Star Plus = $(85 + 100 + 120 + 90 + 125)/5 = 520/5 = 104$

Q:31 The correct answer is **Option 2 i.e. 40.**

There is a total of 450 students in College A

Next month:

Number of students who know swimming in college A
 $= 450 \times 0.4 = 180$

Hence, the number of students who are moved to the group of students who know swimming

$$\Rightarrow 180 - 135 = 45$$

Hence, the remaining number of students in college A who will learn to swim next month $= 85 - 45 = 40$

Q:32 The correct answer is **Option 4 i.e. 400.**

From the bar graph:

Number of students who learn swimming in college E after addition of 25 students $= 125 + 25 = 150$

Hence,

Total number of students in college E $= 150/0.375 = 400$

Q:33 The correct answer is **option 1 i.e. 115.**

From the bar graph:

Total number of students in colleges A, B, C, D, and E who learn swimming

$$\Rightarrow 85 + 115 + 115 + 105 + 125 = 545$$

Suppose the number of students in college F who learn swimming $= X$

So,

$$\Rightarrow (545 + X)/6 = 110$$

$$\Rightarrow X = 660 - 545$$

$$\Rightarrow X = 115$$

Hence, the number of students in college F who learn swimming $= 115$

Q:34 The correct answer is **Option 1 i.e. 132%.**

From the bar graph:

Total number of students who know swimming in colleges A and E together

$$\Rightarrow 135 + 155 = 290$$

And, the Total number of students who learn swimming in colleges C and D together

$$\Rightarrow 115 + 105 = 220$$

Hence, Required percentage $= [290/220] \times 100 = 131.8\% \text{ or } 132\%$

Q:35 The correct answer is **Option 3 i.e. 189.**

From the bar graph:

Number of students who neither know swimming nor learn swimming in college B

$$\Rightarrow 424 - (120 + 115)$$

$$\Rightarrow 424 - 235 = 189$$

Q:36 The correct answer is **Option 1 i.e. Rs 1125.**

The cost price of B = Rs 6250

Selling price of B = Rs 5250

Loss $= 6250 - 5250 = \text{Rs } 1000$

Loss% $= (\text{loss}/\text{CP}) \times 100 = (1000/6250) \times 100 = 16\%$

Profit percent required $= 2\%$

Difference in percentage (both selling prices) $= 2 - (-16) = 18\%$ [loss is taken negative]

Difference in price $= 18\% \text{ of CP} = (18/100) \times 6250 = \text{Rs. } 1125$

Q:37 The correct answer is **Option 4 i.e. Rs 7287.5.**

Cost price of A = Rs 5500

Selling price of A = Rs 6160

Profit $= 6160 - 5500 = \text{Rs } 660$

Profit to other shopkeeper $= \text{Rs } 660/2 = \text{Rs } 330$

Selling price = cost price + Profit $= 5500 + 330 = \text{Rs } 5830$

Let the marked price be x

$$\Rightarrow (100 - 20)\% \text{ of MP} = \text{SP}$$

$$\Rightarrow 80\% \text{ of } x = 5830$$

Marked price = Rs 7287.5

Q:38 The correct answer is **Option 4 i.e. 16%.**

The cost price of B = Rs.6250

The selling price of B = Rs.5250

Loss $= 6250 - 5250 = \text{Rs. } 1000$

Loss% $= (\text{loss}/\text{CP}) \times 100 = (1000/6250) \times 100 = 16\%$

Q:39 The correct answer is **Option 3 i.e. 11%.**

The cost price of C = Rs.8170

The selling price of C = Rs.9558.9

Profit $= 9558.9 - 8170 = \text{Rs. } 1388.9$

Profit% $= (\text{profit}/\text{CP}) \times 100 = (1388.9/8170) \times 100 = 17\%$

The cost price of D = Rs.3230

The selling price of D = Rs.3391.5

Profit $= 3391.5 - 3230 = \text{Rs. } 161.5$

Profit% $= (\text{profit}/\text{CP}) \times 100 = (161.5/3230) \times 100 = 5\%$

Average $= (17\% + 5\%)/2 = 11\%$

Q:40 The correct answer is **Option 4 i.e. 103%.**

Cost price of A and B = Rs.(5500 + 6250) = Rs.11750

Selling price of A and B = Rs.(6160 + 5250) = Rs.11410

Required percentage $= (11750/11410) \times 100 = 102.97 = 103\%$

Q:41 The correct answer is **Option 2 i.e. 30.43%.**

Number of people wearing spectacles in Kolkata = 70000

The total number of people wearing spectacles in Mumbai, Delhi and Gujarat

$$= 80000 + 90000 + 60000 = 2,30,000$$

Percentage $= (70000/230000) \times 100 = 30.43\%$

Q:42 The correct answer is **Option 3 i.e. 51 : 37**

According to the question the number of people wearing contact lenses in Delhi i.e. 25000 are interchanged by the number of people wearing spectacles in Delhi i.e. 90000

In the same way the total number of people wearing contact lenses in Chennai i.e. 20000 are interchanged by total number of people wearing spectacles in Chennai i.e. 40000.

After interchanging, the total number of people wearing spectacles in all the cities

$$= 80000 + 25000 + 60000 + 20000 + 70000 = 2,55,000.$$

After interchanging, the total number of people wearing contact lenses in all the cities

$$= 30000 + 90000 + 15000 + 40000 + 10000 = 185000$$

Ratio $= 255000/185000 = 51/37.$

Ratio $= 51 : 37$

Q:43 The correct answer is **Option 1 i.e. 16667.**

According to the question,

20% of people from Mumbai, 30% of people from Gujarat, and 40% of people from Chennai purchase spectacles from lenskart.

So the total number of people purchasing spectacles from LensKart in the given cities

$$= (20\% \text{ of } 80000) + (30\% \text{ of } 60000) + (40\% \text{ of } 40000)$$
$$= 16000 + 18000 + 16000 = 50000.$$

$$\text{Average} = 50000/3 = 16666.66 = 16667$$

Q:44 The correct answer is **Option 4 i.e. 40%.**

The number of people wearing spectacles in Chennai = 40000

The total number of peoples wearing contact lenses in all the cities

$$= 30000 + 25000 + 15000 + 20000 + 10000 = 1,00,000$$

$$\text{Required Percentage} = (40000/100000) \times 100 = 40\%$$

Q:45 The correct answer is **Option 2 i.e. 68,000.**

The total number of peoples wearing spectacles = $80000 + 90000 + 60000 + 40000 + 70000$

$$= 340000$$

$$\text{Required average} = 340000/5 = 68000$$

Q:46 The correct answer is **option 4 i.e. 20.16.**

The selling price of 500 mobiles = 1600000

The selling price of 1 mobile = $1600000/500 = \text{Rs } 3200$

The selling price of 1 mobile (B) = $(100 - 25)\% \text{ of } 3200$
= Rs 2400

The selling price of 840 mobiles = $840 \times 2400 = 2016000 = 20.16 \text{ lakhs}$

Q:47 The correct answer is **option 2 i.e. 157.5.**

Average = Sum of terms/number of terms

Average sales of mobile of company A = $(420 + 550 + 360 + 500)/4 = 457.5$

Average sales of mobile of company B = $(480 + 600 + 540 + 840)/4 = 615$

$$\text{Required difference} = (615 - 457.5) = 157.5$$

Q:48 The correct answer is **option 4 i.e. none of these.**

Mobiles sold in 2024 = $500 + 840 = 1340$

Mobiles sold by B in 2022 = 600

Difference = $1340 - 600 = 740$

$$\text{Required percentage} = (740/600) \times 100 = 123.33$$

Q:49 The correct answer is **option 3 i.e. 40.**

Mobiles sold in 2021 = $(420 + 480) = 900$

Mobiles sold by A in 2023 = 360

$$\text{Required percentage} = (360/900) \times 100 = 40\%$$

Q:50 The correct answer is **option 4 i.e. 627.**

Mobiles sold by A in 2020 = $(100 + 20)\% \text{ of Mobiles sold in 2021} = 120\% \text{ of } 420 = 504$

Mobiles sold by B in 2020 = $(100 + 25)\% \text{ of Mobiles sold in 2022} = 125\% \text{ of } 600 = 750$

$$\text{Required average} = (750 + 504)/2 = 627$$

Q:51 The correct answer is **Option 4 i.e. 72 : 175.**

We have the total marks and the marks scored by Rajesh

Total marks in all UT's and half-yearly and final exams
 $\Rightarrow (250 + 250 + 250 + 500 + 500) = 1750$

Total marks obtained by Rajesh in UT's = Sum of marks obtained by him in all subjects and all UT's
 $\Rightarrow (40 + 30 + 32 + 20 + 25 + 30 + 28 + 34 + 18 + 22 + 40 + 30 + 25 + 16 + 20)$
 $\Rightarrow 410$

Total marks obtained by Rajesh in Final exams

$$\Rightarrow (50 + 60 + 95 + 55 + 50) = 310$$

Total marks obtained in all UT's and Final exams together
 $\Rightarrow (410 + 310) = 720$

Thus, the ratio will be -

Total marks obtained in all UT's and Final exams together : Total marks in all UT's and half-yearly and final exams
 $\Rightarrow 720 : 1750 = 72 : 175$

Q:52 The correct answer is **Option 2 i.e. 4.22%.**

We have the total marks and the marks scored by Rajesh

Percentage = $(\text{Total marks obtained by Rajesh in all 5 subjects in all the exams} \times 100)/\text{Total marks of all 5 exams of 5 subjects}$

Total marks in all UT's and half-yearly and final exams
 $= (250 + 250 + 250 + 500 + 500) = 1750$

Total marks obtained by Rajesh in English = $40 + 30 + 75 + 40 + 50 = 235$

Total marks obtained by Rajesh in Hindi = $30 + 28 + 90 + 30 + 60 = 238$

Total marks obtained by Rajesh in Mathematics = $32 + 34 + 60 + 25 + 95 = 246$

Total marks obtained by Rajesh in Science = $20 + 18 + 60 + 16 + 55 = 169$

Total marks obtained by Rajesh in Social Science = $25 + 22 + 40 + 20 + 50 = 157$

Total marks obtained by Rajesh in all 5 subjects in all the exams = $235 + 238 + 246 + 169 + 157 = 1045$

Overall percentage = $(1045 \times 100)/1750 = 59.71$

New total when Rajesh scored more and less in some subjects - Percentage Change = $[(\text{New value} - \text{Old value}) \times 100]/\text{Old value}$

New total obtained = $(1045 - 6 - 10 + 12 + 28 + 20) = 1089$

New overall percentage = $(1089 \times 100)/1750 = 62.23$

Percentage change between new and old overall percentage = $[(62.23 - 59.71) \times 100]/(59.71) = 252/59.71 = 4.22\%$

Q:53 The correct answer is **Option 4 i.e. 35.43%**.

Total marks obtained by Rajesh in UT's = Sum of marks obtained by him in all subjects and all UT's = $(40 + 30 + 32 + 20 + 25 + 30 + 28 + 34 + 18 + 22 + 40 + 30 + 25 + 16 + 20) = 410$

Total marks obtained by Rajesh in Half-yearly and Final exams = Sum of marks obtained by him in all subjects = $(75 + 90 + 60 + 60 + 40 + 50 + 60 + 95 + 55 + 50) = 635$

Percentage less = [(Total marks obtained by Rajesh in Half-yearly and Final exams - Total marks obtained by Rajesh in UT's $\times 100$)]/Total marks obtained by Rajesh in Half-yearly and Final exams

$$\text{Percentage less} = [(635 - 410) \times 100]/635 = 22500/635 = 35.43\%$$

Q:54 The correct answer is **Option 3 i.e. 59.71%**.

We have the total marks, cut-off marks, and the marks scored by Rajesh

Total marks of UT1, 2 and 3 for each subject = $50 + 50 + 50 = 150$

Total marks of Half-yearly and final exams of all subjects = $100 + 100 = 200$

Total marks of all 5 exams of 5 subjects = $5(150 + 200) = 5 \times 350 = 1750$

Total marks obtained by Rajesh in English = $40 + 30 + 75 + 40 + 50 = 235$

Total marks obtained by Rajesh in Hindi = $30 + 28 + 90 + 30 + 60 = 238$

Total marks obtained by Rajesh in Mathematics = $32 + 34 + 60 + 25 + 95 = 246$

Total marks obtained by Rajesh in Science = $20 + 18 + 60 + 16 + 55 = 169$

Total marks obtained by Rajesh in Social Science = $25 + 22 + 40 + 20 + 50 = 157$

Total marks obtained by Rajesh in all 5 subjects in all the exams = $235 + 238 + 246 + 169 + 157 = 1045$

Percentage = (Total marks obtained by Rajesh in all 5 subjects in all the exams $\times 100$)/Total marks of all 5 exams of 5 subjects

$$\text{Overall percentage} = (1045 \times 100)/1750 = 59.71\%$$

Q:55 The correct answer is **Option 2 i.e. 2**.

The subjects in which Rajesh got marks less than the cut-off are Science and Social science i.e. 2 subjects

Q:56 The correct answer is **option 4 i.e. 4.17 stars**

Average rating of Facebook = 4.1 stars

Number of people who downloaded Facebook = 800

Average rating of TikTok = 2.3 stars

Number of people who downloaded TikTok = 1400

Now, the Combined Average rating of all Apps = 3.8 stars

Number of total downloads of all apps = $1600 + 1200 + 2200 + 800 + 1400 = 7200$

Let average rating of other 3 apps except Facebook and TikTok = y stars

Now,

$$(800 \times 4.1) + (1400 \times 2.3) + (5000 \times y) = 3.8 \times 7200$$

$$y = (27360 - 3280 - 3220)/5000$$

$$y = 4.172 \text{ or } 4.17 \text{ stars}$$

Q:57 The correct answer is **option 4 i.e. 56.52%**.

Total Number of downloads of Entertainment Apps = $1200 + 1400 = 2600$

Total number of downloads of social apps = $1600 + 800 = 2400$

Total number of Video Streaming apps = 2200

Hence, relative percentage of Entertainment apps to Social and Video streaming apps combined:

$$\Rightarrow 2600/(2400 + 2200) \times 100 = 56.52\%$$

Q:58 The correct answer is **option 3 i.e. 11 : 5**.

Total PUBG downloads = 1200

$$40\% \text{ of them uninstalled i.e. } 0.4 \times 1200 = 480$$

This 480 was replaced with Whatsapp and Facebook in ratio 7 : 5

So, increase in Whatsapp downloads = $7/(7 + 5) \times 480 = 280$

Increase in Facebook Downloads = $5/(7 + 5) \times 480 = 200$

Total Facebook users this month = $800 + 200 = 1000$

MX Player downloads last month = 2200

Ratio of MX Player downloads last month to increased Facebook users this month = $2200 : 1000 = 11 : 5$

Q:59 The correct answer is **option 1 i.e. 52 : 115**.

Total Chinese app download = $1200 + 1400 = 2600$

$$20\% \text{ of them uninstalled i.e. } 0.2 \times 2600 = 520$$

Hence, users left after uninstalling = $2600 - 520 = 2080$

Number of downloads of other apps last month = $1600 + 2200 + 800 = 4600$

$$\text{Required Ratio} = 2080 : 4600 = 52 : 115$$

Q:60 The correct answer is **option 2 i.e. 80%**.

Average number of downloads of all the apps = $(1600 + 1200 + 2200 + 800 + 1400)/5 = 1440$

Now, number of Facebook app downloads = 800

Hence, average downloads was $1440/800$ i.e. 1.8 times or 80% more than of Facebook downloads.

Q:61 The correct answer is **Option 1 i.e. 40**.

From the Bar graph:

Average number of students present on Monday in Class 7th and 8th together = $[36 + 44]/2 = 40$

Q:62 The correct answer is **Option 3 i.e. 123.07%**.

From the Bar graph:

Number of students present in class 6th on Monday = 48

Number of students present in class 7th on Tuesday = 26

Hence,

$$\text{Required percentage} = [(48 - 26)/26] \times 100 = 1100/13 = 84.61\%$$

Q:63 The correct answer is **Option 4 i.e. 64 : 49**.

From the Bar graph:

Total students present in 3 classes on Monday = 48 + 36 + 44 = 128

Total students present in 3 classes on Tuesday = 38 + 26 + 34 = 98

Hence,

$$\text{Ratio} = 128 : 98 = 64 : 49$$

Q:64 The correct answer is **Option 4 i.e. 4.**

From the Bar graph:

$$\text{Average number of students present in Class 6th in 2 days} = [48 + 38]/2 = 86/2 = 43$$

$$\text{Average number of students present in Class 8th in 2 days} = [44 + 34]/2 = 39$$

$$\text{Hence, Difference} = 43 - 39 = 4$$

Q:65 The correct answer is **Option 3 i.e. 53.8%.**

From the Bar graph:

$$\text{Number of students present in class 7th on Monday} = 36$$

$$\text{Number of students present in class 8th in 2 days together} = 44 + 34 = 78$$

Hence,

$$\text{Required percentage} = [(78 - 36)/78] \times 100 = 53.8\%$$

Q:66 The correct answer is **Option 4 i.e 55.46%**

From the bar graph:

$$\text{Total number of words in } 25\% \text{ of the book B} = 240 \times 110 \times 0.25 = 6,600$$

And

$$\text{Total number of words in } 1/3 \text{ of the book D} = 255 \times 140 \times 1/3 = 11,900$$

Hence,

$$\text{Required percentage} = [6600/11900] \times 100 = 55.46\%$$

Q:67 The correct answer is **Option 1 i.e. 9380**

From the bar graph:

There are 120 words in each page of book A and 95 words in each page of book B.

So,

$$\text{Total number of words read by Harish everyday} = 120 \times 8 + 95 \times 4 = 1340$$

Hence,

$$\text{Total number of words read by him in a week} = 1340 \times 7 = 9380$$

Q:68 The correct answer is **Option 2 i.e. 225**

From the bar graph:

$$\text{Total number of words in Books C} = 190 \times 135$$

Given: He completes the book in 16 weeks 2 days i.e. total 114 days.

$$\text{Hence, } x = (190 \times 135)/114 = 225$$

Q:69 The correct answer is **Option 3 i.e. 18%**

From the bar graph:

Average number of pages in all 5 books

$$= [215 + 240 + 190 + 255 + 220]/5 = 1120/5 = 224$$

$$\text{Number of pages in book C} = 190$$

Hence,

$$\text{Required percentage} = [(224 - 190)/190] \times 100 = 17.89\% \text{ or } 18\% \text{ (Approx.)}$$

Q:70 The correct answer is **Option 3 i.e. 615 : 473**

From the bar graph:

Total number of words in Books A and D

$$= 215 \times 120 + 255 \times 140 = 25800 + 35700 = 61500$$

And, total number of words in Books B and E

$$= 240 \times 110 + 220 \times 95 = 26400 + 20900 = 47300$$

Hence,

$$\text{Required ratio} = 61500 : 47300 = 615 : 473$$

Q:71 The correct answer is **Option 3 i.e. 15.**

Total number of students studying Math and Chemistry in coaching Q = $60 + 45 = 105$

And,

Total number of students studying Physics and Hindi in coaching Q = $50 + 25 = 75$

Now, suppose 'x' students are added in maths classes

So,

$$\Rightarrow (105 + x) : 75 = 8 : 5$$

$$\Rightarrow x = 15$$

Hence, 15 more students should be added to the Math class for coaching Q.

Q:72 The correct answer is **Option 4 i.e. 223.**

Total number of students in coaching P = $(65 + 45 + 30 + 55 + 30) = 225$

After change:

Total number of students in coaching P = $225 + 30 \times 0.3 - 55 \times 0.2 = 223$

Q:73 The correct answer is **Option 4 i.e. 15 : 17.**

Total number of students studying Physics and Hindi in coaching P = $45 + 30 = 75$

And,

Total number of students studying English and Hindi in coaching Q = $60 + 25 = 85$

Hence,

$$\text{Required ratio} = 75 : 85 = 15 : 17$$

Q:74 The correct answer is **Option 1 i.e. 3.**

The average number of students studying different subjects in coaching Q

$$\Rightarrow (60 + 50 + 45 + 60 + 25)/5 = 240/5 = 48$$

And,

The average number of students studying different subjects in coaching P

$$\Rightarrow (65 + 45 + 30 + 55 + 30)/5 = 225/5 = 45$$

Hence,

$$\text{Required difference} = 48 - 45 = 3$$

Q:75 The correct answer is **Option 2 i.e. 79.16%.**

Total number of students studying Physics and Chemistry in coaching Q

$$\Rightarrow 50 + 45 = 95$$

And,

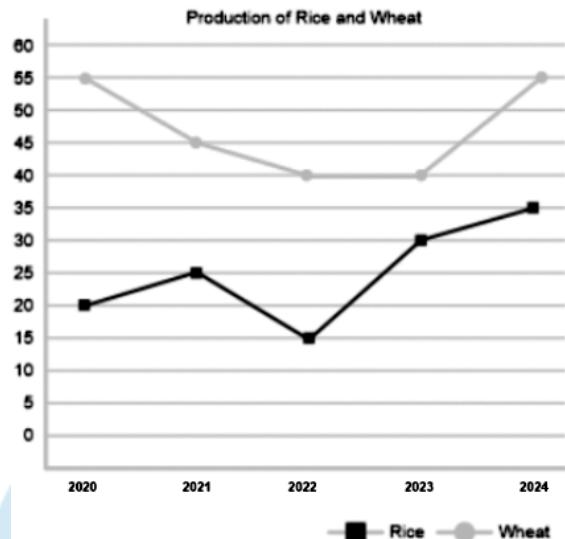
Total number of students studying English and Math in coaching P

$$\Rightarrow 65 + 55 = 120$$

Hence, Required percentage = $[95/120] \times 100 = 79.16\%$

LINE GRAPH

Direction (1-5): The following line graph shows the production of Rice and Wheat (in tons) over a period of five years i.e. from 2020 to 2024.



Refer the given data and answer the following question.

Q:1 What is the ratio between the production of rice to the production of wheat over the period of five years?

- 1. 43 : 10
- 2. 38 : 51
- 3. 44 : 17
- 4. 25 : 47

Q:2 If 10%, 20%, 30%, 40% and 50% of wheat produced is consumed in all the given years respectively then find the average consumption of the wheat.

- 1. 12 tons
- 2. 11 tons
- 3. 14 tons
- 4. 14.3 tons

Q:3 The production of wheat in the year 2023 is what percent of the total production of rice in the year 2021 and 2024?

- 1. 66.66%
- 2. 66%
- 3. 66.12%
- 4. 63.66%

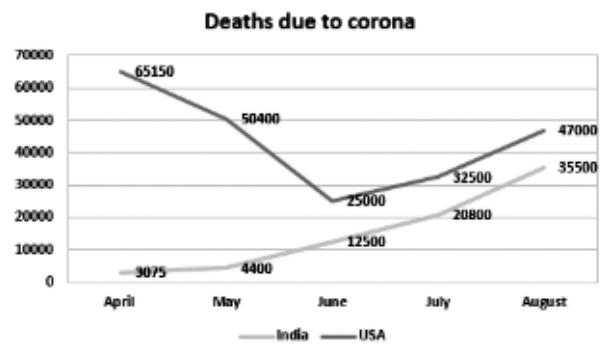
Q:4 If a factory sells rice for Rs. 572 per ton, what will be the average selling price for the years 2021, 2022 and 2023? (approx.)

- 1. Rs. 13,343
- 2. Rs. 13,344
- 3. Rs. 13,348
- 4. Rs. 13,347

Q:5 What is the average production (in tons) of rice for all the years together?

- 1. 22 tons
- 2. 25 tons
- 3. 23 tons
- 4. 26 tons

Directions (6-10): The following line graph shows the number of deaths due to coronavirus in India and the USA in the last 5 months. Study the graph and answer the following question.



Q:6 Find the difference between the total deaths in the USA and the total deaths in India.

- 1. 143775
- 2. 14751
- 3. 12547
- 4. 14332

Q:7 What is the average number of deaths in USA?

- 1. 44010
- 2. 44101
- 3. 44001
- 4. 44100

Q:8 The number of deaths in June in India is what percent of the total deaths in April and May in the USA?

- 1. 10.82%
- 2. 11.85%
- 3. 12.84%
- 4. 10.95%

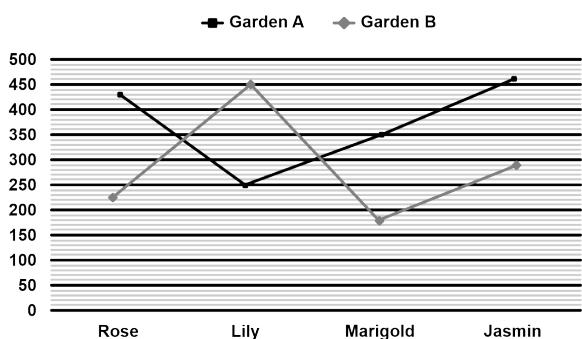
Q:9 Find the total number of deaths in the month of April.

- 1. 68225
- 2. 95000
- 3. 10000
- 4. 12540

Q:10 Find the ratio of the number of deaths in India in the month of May to the number of deaths in the USA in the month of June.

- 1. 22 : 125
- 2. 22 : 127
- 3. 125 : 22
- 4. 127 : 22

Direction (11-15): The line graph below shows the number of flowers of 4 types: Rose, Lily, Marigold, and Jasmin in two gardens A and B. Study the graph carefully and answer the questions that follow.



Q:11 There is an order of flower decorations in which 550 Rose, 450 Marigold, and 400 Jasmin are to be delivered. The flowers are plucked from Garden A first and in case Garden A does not have sufficient flowers, the remaining flowers are plucked from Garden B. What will be the ratio of remaining Rose, Marigold, and Jasmin flowers in Garden B?

1. 3 : 2 : 7 2. 5 : 4 : 7
3. 5 : 2 : 9 4. 2 : 3 : 5

Q:12 The next day, 20 Rose flowers in Garden A and some Jasmin flowers in Garden B got wasted. If the ratio of Rose flowers in garden A and Jasmin flowers in garden B is now 2 : 1 then how many Jasmin flowers in garden B got wasted?

1. 65 2. 60
3. 75 4. 80

Q:13 The gardener plucked 30% of the Lily flowers in garden A and 2/5th of the Lily flowers in garden B. If he prepared 5 garlands of equal length from these flowers, then find the number of flowers used in a garland. (21 flowers got wasted while plucking)

1. 42 2. 48
3. 44 4. 46

Q:14 The cost of Jasmin flowers is Rs. 16/dozen and that of Rose flower is 40 paisa per flower. Find the total cost of Rose and Jasmin flowers in Garden A.

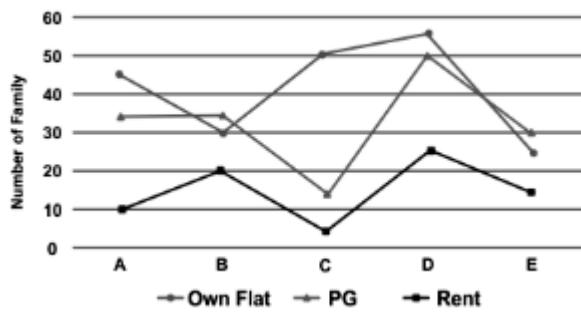
1. Rs. 742 2. Rs. 750
3. Rs. 748 4. Rs. 772

Q:15 5 garlands are prepared and 25 Marigold flowers, 20 Jasmin flowers, and 10 Lily flowers are used in each garland. If all the flowers are plucked from garden B then find the total number of remaining flowers in garden B.

1. 885 2. 865
3. 925 4. 905

Directions (16-20): The following line graph gives information about the number of families who live in their own flats, in PG, or at rent in 5 different blocks of Bhopal. Read the graph carefully and answer the following questions.

(All values in the graph are in multiples of 5)



Q:16 In block B, the average number of member in each family living at rent is 3 while the average number of members in each family for the other 2 categories are 4. What is the percentage of people who live in PG in Block B?

1. 41.6% 2. 43.7%
3. 39.4% 4. 40.2%

Q:17 What is the average number of families across all the blocks?

1. 92 2. 97
3. 86 4. 89

Q:18 What is the combined percentage of families living at Rent across all the Blocks?

1. 17.6% 2. 16.8%
3. 19.4% 4. 20.3%

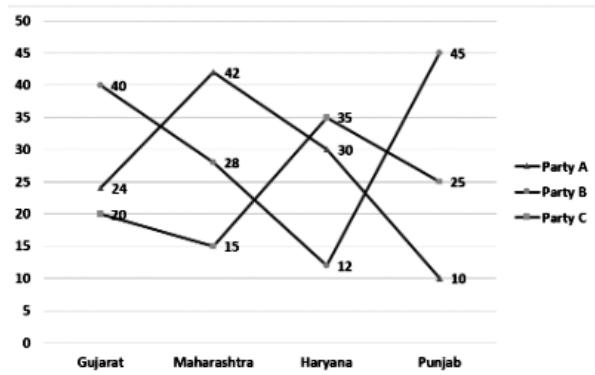
Q:19 Block A and D are high-class blocks while others are Middle-class blocks. What is the ratio of the number of families living either at rent or PG in High-class blocks to the number of families living in their own flats in Middle-class blocks?

1. 7 : 8 2. 8 : 7
3. 11 : 12 4. 12 : 11

Q:20 This month, 25% of families living at Rent in Block B bought the flat in which they were living and 12% of families living at Rent in Block D bought the flat in which they were living. What is the new percentage of the total number of families who are living in their own flats across all the blocks?

1. 36.3% 2. 43.4%
3. 47.8% 4. 44.6%

Direction (21-25): Elections have been conducted in 4 states Gujarat, Maharashtra, Haryana, and Punjab. The line graph below shows the percentage share of total cast votes received by 3 parties A, B, and C in all these states. Read the graph carefully and answer the questions.



Q:21 Out of the total casted votes, 28000 votes were declared invalid in Maharashtra and remaining votes are received by 4th party. If the winning party in Maharashtra wins by 49000 votes to party at 2nd place then find the number of votes received by 4th party in Maharashtra.

- 1. 27500
- 2. 25000
- 3. 23500
- 4. 24500

Q:22 In Punjab, only given 3 parties contested in the election and rest of the casted votes are declared invalid. Find the percentage of valid votes received by party C in Punjab.

- 1. 32.5%
- 2. 20%
- 3. 31.25%
- 4. 25%

Q:23 In Haryana, only 50% voters voted and 5% of total casted votes were declared invalid. Total 5 parties contested in Haryana and ratio of votes received by 4th and 5th parties was 4 : 5. If 4th party received 32000 votes then find the total number of voters in Haryana.

- 1. 750000
- 2. 700000
- 3. 900000
- 4. 800000

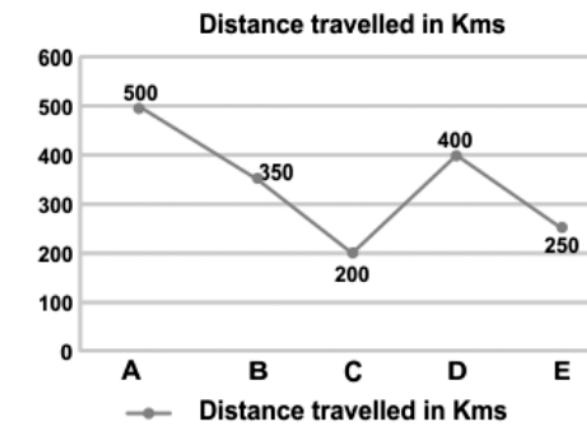
Q:24 If the difference of votes received by winning parties in Maharashtra and Gujarat is 19000 and difference of votes received by parties at 2nd place in Maharashtra and Gujarat is 21200, then find the sum of total casted votes in 2 states.

- 1. 670000
- 2. 640000
- 3. 700000
- 4. 600000

Q:25 In Gujarat, only 4 parties contested the election and 4th party received 30000 votes. If the voting percentage in Gujarat was 62.5% and 18000 votes were declared invalid then find the total number of Voters in Gujarat.

- 1. 300000
- 2. 420000
- 3. 480000
- 4. 360000

Directions (26-30): The following line graph shows the different distances travelled by 5 persons i.e. A, B, C, D, and E.



Q:26 What is the average distance traveled by all the people?

- 1. 340 km
- 2. 250 km
- 3. 500 km
- 4. 200 km

Q:27 If the speed of B and D is 70 km/hr and 40 km/hr respectively, find the total time taken by them to reach their destinations.

- 1. 12 hrs
- 2. 15 hrs
- 3. 13 hrs
- 4. 10 hrs

Q:28 If each person took 5 hrs to reach their destinations then, find the average of their speed.

- 1. 54 km/h
- 2. 28 km/h
- 3. 30 km/h
- 4. 68 km/h

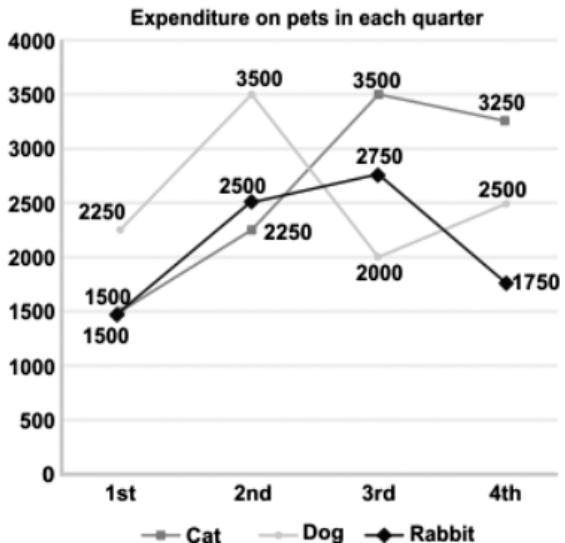
Q:29 If A traveled 200 km on a bike and traveled the rest of the journey by car. If the speed of the car was 60 km/h then, find the time taken by him to travel the rest of the journey by car.

- 1. 8 hrs
- 2. 5 hrs
- 3. 6 hrs
- 4. 12 hrs

Q:30 If the speed of C and E is 40 km/h and 50 km/h respectively then, find the ratio of time taken by them.

- 1. 1 : 1
- 2. 2 : 5
- 3. 3 : 4
- 4. 5 : 7

Directions (31-35): The following line graph gives information about a person's expenditure on different pets i.e. cat, dog, and rabbit in each quarter of the year 2024. Read the graph carefully and answer the following questions.



Q:31 What is the difference in the expenditure between the quarter in which he spent maximum and the quarter in which he spent minimum?

- 1. Rs. 2250
- 2. Rs. 2500
- 3. Rs. 1250
- 4. Rs. 3000

Q:32 What is the ratio of expenditure on cat in the first quarter and third quarter to expenditure on dog in the second and fourth quarters?

- 1. 16 : 19
- 2. 5 : 6
- 3. 18 : 19
- 4. 23 : 25

Q:33 If the 1st and 4th quarters are considered as winters and the other 2 quarters as summers, what is the difference in total expenditure on all pets between winters and summers?

- 1. Rs. 2250
- 2. Rs. 3750
- 3. Rs. 2750
- 4. Rs. 3000

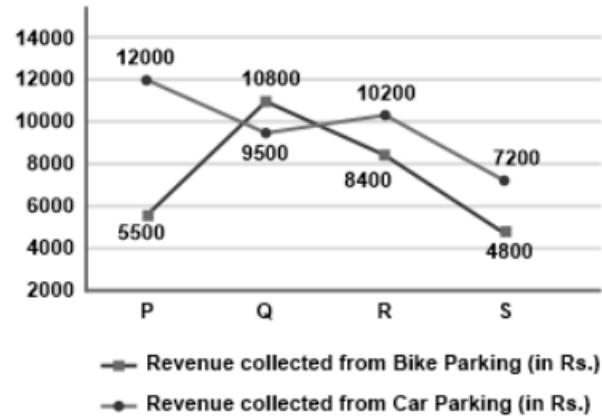
Q:34 What is the average expenditure on all pets combined in 2024?

- 1. Rs. 9750
- 2. Rs. 9000
- 3. Rs. 10500
- 4. Rs. 9500

Q:35 Total expenditure on Rabbit is what percentage of total expenditure on Dog? (Approx.)

- 1. 64%
- 2. 62%
- 3. 60%
- 4. 83%

Direction (36-40): The line graph given below shows the revenue collected in a day from 4 parking lots P, Q, R and S by selling tickets for bike parking and car parking. Study the data carefully and answer the question given below.



Q:36 Total revenue collected from parking lots R and S is approximately how much percentage less than the total revenue collected from parking lots P and Q?

- 1. 22%
- 2. 16%
- 3. 19%
- 4. 21%

Q:37 The ratio of per ticket cost of car and bike parking in parking lot P is 16 : 11. If there are total 625 vehicles in the parking lot P then find the difference between the number of bikes and cars in the parking.

- 1. 75
- 2. 120
- 3. 100
- 4. 125

Q:38 If there are total 980 vehicles in parking lot Q and the per ticket cost of car parking is Rs 25 then find the per ticket cost of bike parking.

- 1. Rs. 16
- 2. Rs. 18
- 3. Rs. 20
- 4. Rs. 12

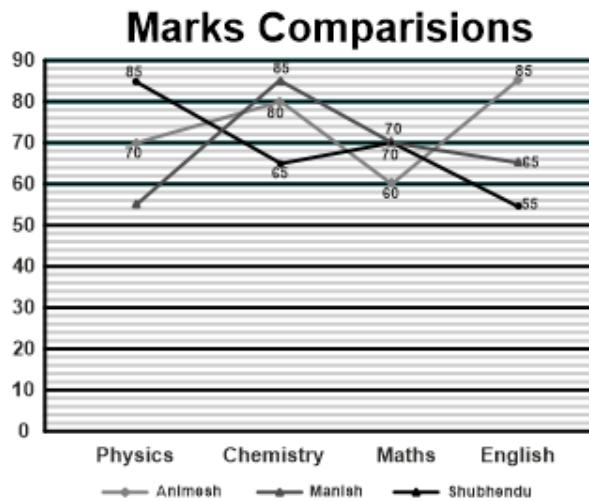
Q:39 If the per ticket price of car and bike parking is Rs. 30 and Rs. 15 respectively in both the parking lots R and S then find the difference of total number of vehicles (Cars + Bike) in both parking lots.

- 1. 340
- 2. 280
- 3. 360
- 4. 420

Q:40 What is the difference of average amount of revenue collected from 4 parking lots by selling tickets for car parking and that for bike parking?

- 1. Rs. 2250
- 2. Rs. 2500
- 3. Rs. 2450
- 4. Rs. 2350

Direction (41-45): The following line graph gives the information about the marks of three students in various subjects. Read the graph carefully and answer the following questions.



Q:41 How many more marks will Subhendu have to score to get equal marks to the student who has scored the highest marks in all subjects among the three?

1. 20
2. 45
3. 35
4. 60

Q:42 What is the ratio of combined marks in Maths and English obtained by Animesh and Manish ?

1. 27 : 29
2. 29 : 27
3. 31 : 28
4. 28 : 31

Q:43 Which subject can be considered as highest scoring subject on the basis performance of all students?

1. Physics
2. Chemistry
3. Maths
4. English

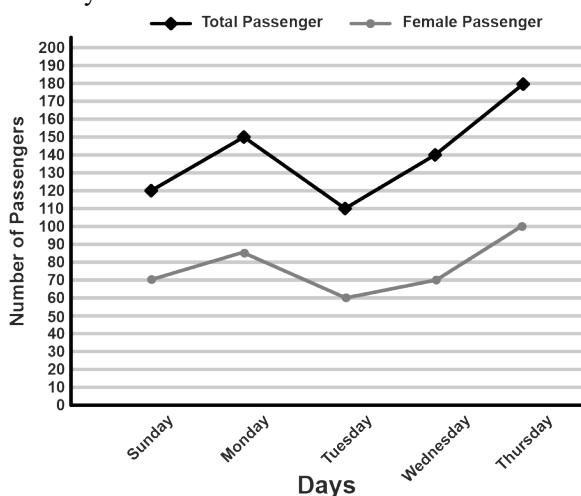
Q:44 If maximum marks of all subjects are 100, what is percentage difference of marks between Subhendu and Manish?

1. 5%
2. 7%
3. 10%
4. None of these

Q:45 What are the average combined marks of Animesh, Manish and Subhendu?

1. 288.33
2. 285.66
3. 281.66
4. 287.66

Directions (46-50): The following line graph shows the number of passengers(in thousands) who travel from Rayagada to Bhubaneshwar on different days of the week i.e. Sunday, Monday, Tuesday, Wednesday and Thursday.



Refer to the graph and answer the following questions.

Q:46 If there is an increment in the number of female passengers on Tuesday and Wednesday by 40% and 20% respectively then find the total number of female passengers on all days together.

1. 423060
2. 423000
3. 423500
4. 423050

Q:47 The average number of female passengers is what percent of the total number of passengers?

1. 12.83%
2. 12%
3. 14.83%
4. 15%

Q:48 If the number of passengers who travel from Rayagada to Bhubaneswar on Friday is 20% more than the total number of passengers who travel on Wednesday and the ratio between male and female passengers is 3 : 5 then, find the number of female passengers who travel on Friday.

1. 1,55,500
2. 1,68,000
3. 1,05,000
4. 1,55,000

Q:49 The total number of male passengers who travel on Tuesday and Wednesday is approximately how much percent more than the number of male passengers who travel on Thursday?

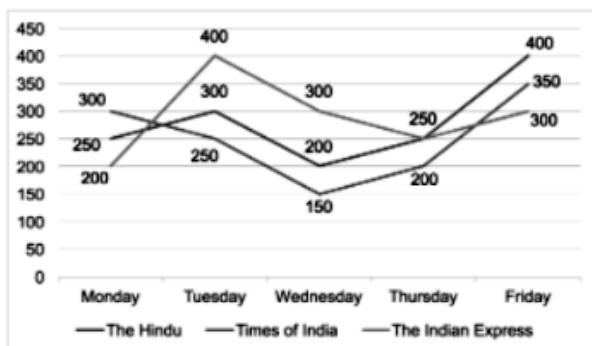
1. 20%
2. 30%
3. 40%
4. 50%

Q:50 The number of male passengers on Thursday and the total number of passengers on Monday combined is what percent of the total number of female passengers?

1. 59.54%
2. 57.74%
3. 69.74%
4. 59.74%

Directions (51-55): Answer the questions based on the information given below.

The given line chart shows the number of copies of different newspapers sold on different days of the week.



Q:51 Find the difference between numbers of copies sold of The Hindu on Friday and number of copies sold of Times of India on Wednesday.

1. 150
2. 200
3. 250
4. 300

Q:52 The number of copies sold of Times of India on Saturday is 20% more than average number of copies sold of Times of India in given days. Find the number of copies sold of Times of India on Saturday.

1. 200
2. 250
3. 300
4. 350

Q:53 The number of copies of The Hindu sold on Wednesday is what percentage of the number of copies of The Indian Express on Thursday?

1. 20%
2. 40%
3. 60%
4. 80%

Q:54 Find the ratio of number of copies sold of Times of India on Tuesday and Wednesday taken together to the number of copies sold of The Indian Express on Monday and Tuesday together.

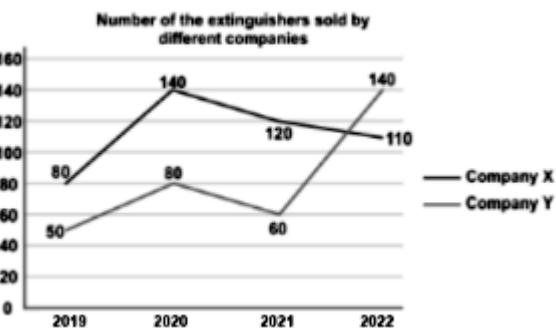
1. 2 : 3
2. 3 : 4
3. 4 : 5
4. 5 : 6

Q:55 Find the average number of copies of The Hindu sold in the given days.

1. 200
2. 240
3. 280
4. 320

Direction (56-60): Answer the questions based on the information given below.

The line graph below provides information about the number of fire extinguishers sold by different companies during different years.



Q:56 What was the average of number of fire extinguishers sold by each company in the given 4 years combined?

1. 390
2. 380
3. 375
4. 405

Q:57 The number of fire extinguishers sold by company X in 2022 was what percentage of the number of fire extinguishers sold by the 2 companies combined in 2022?

1. 38%
2. 26%
3. 54%
4. None of these

Q:58 What was the ratio of the number of fire extinguishers sold by company X in 2019 and 2021 combined to the number of fire extinguishers sold by company Y in 2020?

1. 4 : 5
2. 5 : 2
3. 7 : 3
4. 5 : 3

Q:59 What was the average number of fire extinguishers sold by company Y in 2021 and 2022?

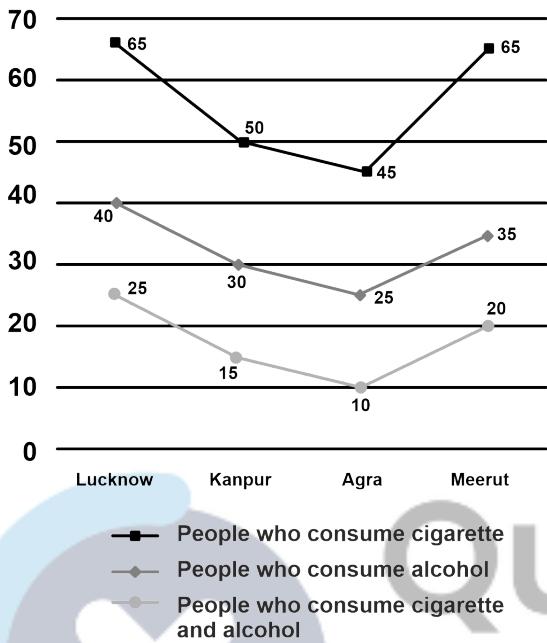
1. 110
2. 90
3. 80
4. 100

Q:60 What was the difference between the total number of fire extinguishers sold by company X in 2019 and 2020 combined and the total number of fire extinguishers sold by company X in 2021 and 2022 combined?

1. 50
2. 10
3. 40
4. 20

Direction (61-65): The below line graph shows the number of people who consume cigarettes, alcohol and both on a daily basis in 4 cities Lucknow, Kanpur, Agra and Meerut. Study the graph carefully and answer the questions that follow. (All the values are in 1000's)

Note: The people who consume both cigarettes and alcohol are included in the number of people who consume cigarettes and the number of people who consume alcohol.



Q:61 In Lucknow, 6.5% of the people who consume both cigarettes and alcohol died and 2315 new people are added who consume alcohol only. What is the number of people who consume alcohol only now in Lucknow?

1. 18490
2. 15850
3. 17315
4. 19040

Q:62 What is the average number of people who consume only cigarettes in four cities?

1. 37750
2. 38250
3. 38500
4. 38750

Q:63 Total number of people who consume cigarettes in Lucknow and Kanpur is what percentage of Total number of people who consume alcohol in same cities?

1. 164.2%
2. 156.2%
3. 158.6%
4. 162.2%

Q:64 What is the sum of number of people who either consume cigarettes or alcohol in Agra and Meerut?

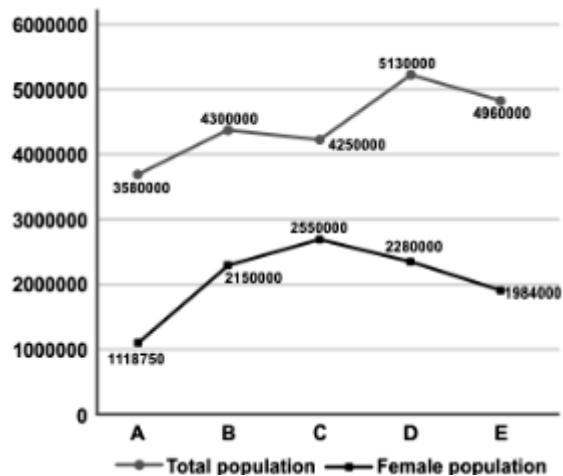
1. 135000
2. 150000
3. 140000
4. 130000

Q:65 What is the ratio of total number of people who consume cigarettes only in Kanpur and Agra and total number of people who consume alcohol only in Lucknow and Meerut?

1. 13 : 11
2. 7 : 3
3. 7 : 5
4. 14 : 9

Direction (66-70): Study the following line graph and answer the questions accordingly

The following line graph shows the total population and female population of five cities A, B, C, D and E.



Q:66 If the number of the female population is doubled in city A without changing the male population, the sex ratio becomes $(3a - 2)/(4a - 5)$. What is the value of a?

1. 2
2. 4
3. 6
4. 8

Q:67 A new city F has a total population that is equal to the average population of cities B, C and D and a female population that is equal to the average female population of cities D and E. What is the difference between the male and female populations of city F?

1. 246000
2. 256000
3. 276000
4. 296000

Q:68 What is the sum of the sex ratio of cities B and D?

1. 1.5
2. 1.6
3. 1.7
4. 1.8

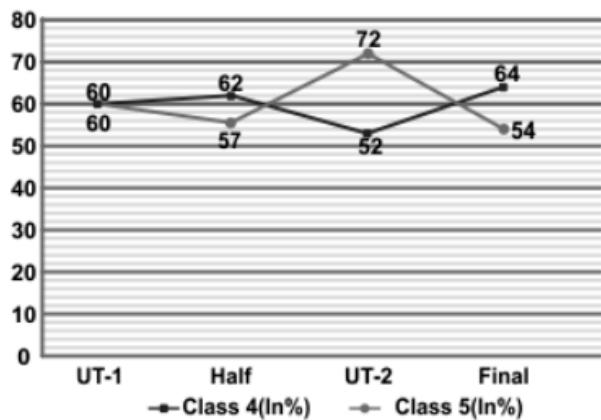
Q:69 What is the sex ratio (number of females: number of males) in the only city with more female population than a male population?

1. 4 : 3
2. 3 : 2
3. 4 : 5
4. 3 : 5

Q:70 What is the average male population of the cities?

1. 2427450
2. 2724450
3. 2424750
4. 2524750

Directions (71-75): The line graph shows the average score of students of Class 4 and Class 5 during several exams throughout the year. The ratio of number of students in Class 4 and Class 5 are in the ratio 3 : 2. Read the data carefully and answer the questions that follow.



Q:71 If the total number of students in class 4 is 36 and in rechecking of in UT-2 marks of 3 students of class increased by 34, 28, 10 and that of 3 students decreased by 16 and 10. What will be the new average score of class 4 in UT-2?

1. 51.4 2. 56.4
3. 53.3 4. 55.8

Q:72 If the total number of students is 60, then what is the average score of all the students in the final examination?

1. 50% 2. 60%
3. 55% 4. 65%

Q:73 If in Class 4 there are 3 sections and the ratio of their number of students is 2 : 3 : 4 and the average marks scored by them in the ratio 4 : 3 : 1 in UT-1. By what percent are the average marks of 2nd section more than the class average?

1. 28.57% 2. 30%
3. 33.33% 4. 29.64%

Q:74 If there are 40 students in class 5 and the average percentage of marks in UT- 2 is 60 for all the students of Class 5. If 3 students with 32, 28, 34 marks are removed from the class then what will be the new average percentage of marks of class 5 in UT-2?

1. 60.32 2. 66.95
3. 78.42 4. 58.81

Q:75 What percentage is the number of students in Class 4 to the total students in both classes together?

1. 50% 2. 60%
3. 40% 4. 65%

Answer Key

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

Answers and Solutions

Q:1 The correct answer is **Option 4** i.e. 25 : 47.

Production of rice over the period of five years = $20 + 25 + 15 + 30 + 35 = 125$

Production of wheat over the period of five years = $55 + 45 + 40 + 40 + 55 = 235$

Required ratio = $125 : 235 = 25 : 47$

Q:2 The correct answer is **Option 3** i.e. 14 tons.

According to the question 10%, 20%, 30%, 40%, and 50% of wheat produced is consumed in the years 2020, 2021, 2022, 2023, and 2024.

So, 10% of 55 = 5.5

\Rightarrow 20% of 45 = 9

\Rightarrow 30% of 40 = 12

\Rightarrow 40% of 40 = 16

\Rightarrow 50% of 55 = 27.5

Required total consumption = $5.5 + 9 + 12 + 16 + 27.5 = 70$

Required average consumption = $70/5 = 14$ tons.

Q:3 The correct answer is **Option 1** i.e. 66.66%.

Let the percentage be X.

The production of wheat in the year 2023 = 40 tons

The total production of rice in 2021 and 2024 = $25 + 35 = 60$ tons

Percentage = $(X/100) \times 60 = 40$

$X = (40 \times 100)/60 = 66.66\%$

Q:4 The correct answer is **Option 4** i.e. Rs. 13,347.

The total production of rice in the years 2021, 2022, and 2023 = $25 + 15 + 30 = 70$ tons

The factory sold each ton of rice at Rs. 572

So the total selling price of the rice in those years equals = $572 \times 70 = \text{Rs. } 40,040$

Average selling price = $40040/3 = \text{Rs. } 13,346.66 = \text{Rs. } 13,347$ (approx.)

Q:5 The correct answer is **Option 2** i.e. 25 tons.

Required average production of rice = Sum of the

production of rice in 5 years/5 years

= $(20 + 25 + 15 + 30 + 35)/5 = 25$ tons

Q:6 The correct answer is **Option 1 i.e. 143775.**
 The total number of deaths in the USA = $65150 + 50400 + 25000 + 32500 + 47000 = 220050$
 The total number of deaths in India = $3075 + 4400 + 12500 + 20800 + 35500 = 76275$
 Difference = $220050 - 76275 = 143775$

Q:7 The correct answer is **Option 1 i.e. 44010.**
 The total number of deaths in USA = $65150 + 50400 + 25000 + 32500 + 47000 = 220050$
 Average = $220050/5 = 44010$

Q:8 The correct answer is **Option 1 i.e. 10.82%.**
 The number of deaths in India in June = 12500.
 The total number of deaths in the USA in April and May = $65150 + 50400 = 115550$.
 Percentage = $(12500/115550) \times 100 = 10.82\%$

Q:9 The correct answer is **Option 1 i.e. 68225.**
 In April, total number of deaths = $65150 + 3075 = 68225$

Q:10 The correct answer is **Option 1 i.e. 22 : 125.**
 Number of deaths in India in May = 4400
 Number of deaths in the USA in June = 25000
 Required ratio = $4400 : 25000 = 22 : 125$

Q:11 The correct answer is **option 1 i.e. 3 : 2 : 7.**
 From the line graph:
 Total number of Rose flowers in garden A = 430
 Total number of Marigold flowers in garden A = 350
 Total number of Jasmin flowers in garden A = 450
 Now,
 550 Rose, 450 Marigold, and 400 Jasmin are to be delivered.
 So,
 Number of Rose flowers plucked from Garden B after plucking from Garden A
 $= [550 - 430] = 120$
 Number of Marigold flowers plucked from Garden B after plucking from Garden A
 $= [450 - 350] = 100$
 Number of Jasmin flowers plucked from Garden B after plucking from Garden A = 0 (Garden A has sufficient Jasmin flowers)
 Now,
 Total number of Rose flowers in garden B = 240
 Total number of Marigold flowers in garden B = 180
 Total number of Jasmin flowers in garden B = 280
 Hence,
 The remaining number of Rose flowers in Garden B = $240 - 120 = 120$
 The remaining number of Marigold flowers in Garden B = $180 - 100 = 80$
 The remaining number of Jasmin flowers in Garden B = $280 - 0 = 280$
 Hence,
 Required ratio = $120 : 80 : 280 = 3 : 2 : 7$

Q:12 The correct answer is **option 3 i.e. 75.**
 From the line graph:
 Total number of Rose flowers in garden A = 430
 Total number of Jasmin flowers in garden B = 280
 Suppose 'x' Jasmin's flowers in garden B got wasted.
 So,
 $(430 - 20) : (280 - x) = 2 : 1$
 $410 : (280 - x) = 2 : 1$
 $280 - x = 205$
 $x = 75$
 Hence, 75 Jasmin flowers in Garden B were wasted.

Q:13 The correct answer is **option 4 i.e. 46.**
 From the line graph:
 Total number of Lily flowers in garden A = 250
 Total number of Lily flowers in garden B = 440
 So,
 Number of Lily flowers plucked by the gardener = $250 \times 0.3 + 440 \times 2/5 = 75 + 176 = 251$
 Since 21 flowers got wasted while plucking:
 Number of Lily flowers used to prepare garlands = $251 - 21 = 230$
 Given: He prepared 5 garlands of equal length.
 So,
 Number of flowers used in a garland = $230/5 = 46$

Q:14 The correct answer is **option 4 i.e. Rs. 772.**
 From the line graph:
 Total number of Rose flowers in garden A = 430
 Total number of Jasmin flowers in garden A = 450
 Given:
 The cost of Jasmin flowers is Rs. 16/dozen and that of Rose flowers is 40 paisa per flower
 So,
 Total cost = $430 \times 0.4 + 450/12 \times 16 = 172 + 600 = \text{Rs. } 772$

Q:15 The correct answer is **option 2 i.e. 865.**
 From the line graph:
 Total number of flowers in Garden B = $240 + 440 + 180 + 280 = 1140$
 Given
 Each garland has 25 Marigold flowers, 20 Jasmin flowers and 10 Lily flowers.
 So,
 Total number of flowers used in 5 garlands = $5 \times (25 + 20 + 10) = 275$
 Hence,
 Total number of remaining flowers in garden B = $1140 - 275 = 865$

Q:16 The correct answer is **option 2 i.e. 43.7%.**
 in Block B,
 Number of families on rent = 20
 Number of people = $20 \times 3 = 60$
 Number of families in PG = 35
 Number of people = $35 \times 4 = 140$
 Number of families living in their own flats = 30
 Number of people = $30 \times 4 = 120$
 Hence, percentage of people living in PG in block B = $140/(140 + 60 + 120) \times 100 = 43.7\%$

Q:17 The correct answer is **option 4 i.e. 89.**

Total number of families across all blocks = 445

Total 5 blocks are there.

Hence, Average = $445/5 = 89$

Q:18 The correct answer is **option 2 i.e. 16.8%.**

Total families living on rent across all blocks = $10 + 20 + 5 + 25 + 15 = 75$

Total families across all blocks :

$$\Rightarrow (10 + 35 + 45) + (20 + 30 + 35) + (5 + 15 + 50) + (25 + 50 + 55) + (15 + 25 + 30)$$

$$\Rightarrow 90 + 85 + 70 + 130 + 70$$

$$\Rightarrow 445$$

Relative percentage of families living on Rent = $75/445 \times 100 = 16.8\%$

Q:19 The correct answer is **option 2 i.e. 8 : 7.**

Number of families living on rent in A and D = $10 + 25 = 35$

Number of families living in PG in A and D = $35 + 50 = 85$

$$\text{Total} = 85 + 35 = 120$$

Number of families living in their own flats in B, C, and E = $30 + 50 + 25 = 105$

The ratio of Families living either on rent or PG in High-Class blocks to families living in their own flats in Middle-Class blocks = $120 : 105 = 8 : 7$

Q:20 The correct answer is **option 3 i.e. 47.8%**

Families living on rent in Block B = 20

25% of them bought the flat, i.e. $0.25 \times 20 = 5$ families bought the flat.

Families living on Rent in D = 25

12% of them bought the flat, i.e. $0.12 \times 25 = 3$ families bought the flat.

Now total Families who are living in their own flats across all blocks:

$$= 45 + 30 + 50 + 55 + 25 + 5 + 3$$

$$= 213$$

Total families across all blocks :

$$(10 + 35 + 45) + (20 + 30 + 35) + (5 + 15 + 50) + (25 + 50 + 55) + (15 + 25 + 30)$$

$$= 90 + 85 + 70 + 130 + 70$$

$$= 445$$

Total families living across all blocks = 445

Percentage of families living in their own flats = $213/445 \times 100 = 47.8\%$

Q:21 The correct answer is **option 4 i.e. 24500.**

Suppose total casted votes = x

$$\Rightarrow (0.42 - 0.28) \times x = 49000$$

$$\Rightarrow 0.14x = 49000$$

$$\Rightarrow x = 350000$$

Number of valid votes = $350000 - 28000 = 322000$

Number of votes received by 4th party = $322000 - [350000 \times (0.42 + 0.28 + 0.15)]$

$$\Rightarrow 322000 - 297500 = 24500$$

Q:22 The correct answer is **option 3 i.e. 31.25%.**

Valid votes percentage = $10 + 45 + 25 = 80\%$ of total casted votes

Suppose total casted votes = P

Total Valid votes = 0.8P

Percentage of valid votes received by party C = $25 \times [P/0.8P] = 31.25\%$

Q:23 The correct answer is **option 4 i.e. 800000.**

Total percentage of casted votes received by 4th and 5th party = $100 - (30 + 12 + 35) - 5 = 18\%$

Percentage of total casted votes received by 4th party = $18 \times 4/9 = 8\%$

Number of casted votes = $32000/0.08 = 400000$

In Haryana, only 50% voters casted their votes.

So, Number of voters = $400000/0.5 = 800000$

Q:24 The correct answer is **option 1 i.e. 670000.**

Suppose total casted votes in Maharashtra and Gujarat are X and Y respectively.

Winning party in Maharashtra i.e. Party A received 42% of total casted votes.

Winning party in Gujarat i.e. Party B received 40% of total casted votes.

Party at 2nd place in Maharashtra i.e. Party B received 28% of total casted votes.

Party at 2nd place in Gujarat i.e. Party A received 24% of total casted votes.

According to the question:

$$0.42X - 0.4Y = 19000 \dots\dots\dots (1)$$

$$\text{And, } 0.28X - 0.24Y = 21200 \dots\dots\dots (2)$$

Multiply equation 1 by 3 and equation 2 by 5 and subtract:

$$\Rightarrow 1.26X - 1.4 = 57000 - 106000$$

$$\Rightarrow 0.14X = 49000$$

$$\Rightarrow X = 350000$$

From equation 1:

$$\Rightarrow 0.4Y = 0.42 \times 350000 - 19000$$

$$\Rightarrow 0.4Y = 147000 - 19000$$

$$\Rightarrow 0.4Y = 128000$$

$$\Rightarrow Y = 320000$$

Sum of total casted votes in 2 states = $350000 + 320000 = 670000$

Q:25 The correct answer is **option 3 i.e. 480000.**

Percentages of total casted votes received by A, B and C are 24%, 40% and 20%.

Remaining percentage of casted votes = $100 - (24 + 40 + 20) = 16\%$

Number of casted votes = $(30000 + 18000)/0.16 = 300000$

Number of voters = $300000/0.625 = 480000$

Q:26 The correct answer is **Option 1 i.e. 340 km.**

Total distance travelled by five persons = $500 + 350 + 200 + 400 + 250 = 1700$ km

Average distance = $1700/5 = 340$ km

Q:27 The correct answer is **Option 2 i.e. 15 hrs.**

Distance traveled by B = 350 km

Speed of B = 70 km/h

Time taken by B = $350/70 = 5$ hrs

Distance traveled by D = 400 km

Speed of D = 40 km/h

Time taken by D = $400/40 = 10$ hrs

Total time taken by B and D = $5 + 10 = 15$ hrs

Q:28 The correct answer is **Option 4 i.e. 68 km/h.**

Speed of A = $500/5 = 100$ km/h

Speed of B = $350/5 = 70$ km/h

Speed of C = $200/5 = 40$ km/h

Speed of D = $400/5 = 80$ km/h

Speed of E = $250/5 = 50$ km/h

Now, Average speed = $(100 + 70 + 40 + 80 + 50)/5$

$\Rightarrow 340/5 = 68$ km/h

Q:29 The correct answer is **Option 2 i.e. 5 hrs.**

Total distance travelled by A = 500 km

Distance travelled by bike = 200 km

Distance travelled by car = $500 - 200 = 300$ km

Speed of the car = 60 km/h

Time taken to travel by car = $300/60 = 5$ hrs

Q:30 The correct answer is **Option 1 i.e. 1 : 1.**

Time taken by C = $200/40 = 5$ h

Time taken by E = $250/50 = 5$ h

The ratio of the time taken by C and E = $5 : 5 = 1 : 1$

Q:31 The correct answer is **option 4 i.e. Rs. 3000.**

Total expenditure in quarter 1 = $1500 + 2250 + 1500 =$
Rs. 5250

Total expenditure in quarter 2 = $3500 + 2500 + 2250 =$
Rs. 8250

Total expenditure in quarter 3 = $3500 + 2000 + 2750 =$
Rs. 8250

Total expenditure in quarter 4 = $3250 + 2500 + 1750 =$
Rs. 7500

Required difference = $8250 - 5250 = \text{Rs. } 3000$

Q:32 The correct answer is **option 2 i.e. 5 : 6.**

Expenditure on cat in 1st and 3rd quarter = $1500 +$
 $3500 = 5000$

Expenditure on dog in 2nd and 4th quarter = $3500 +$
 $2500 = 6000$

Required ratio = $5000 : 6000 = 5 : 6$

Q:33 The correct answer is **option 2 i.e. Rs. 3750.**

Total expenditure on all pets in quarter 1st and quarter
4th = $(1500 + 2250 + 1500) + (1750 + 2500 + 3250)$
 $\Rightarrow 5250 + 7500 = \text{Rs. } 12750$

Total expenditure on all pets in quarter 2nd and quarter
3rd = $(3500 + 2500 + 2250) + (3500 + 2750 + 2000)$
 $\Rightarrow 8250 + 8250 = \text{Rs. } 16500$

Difference in Expenditure = $16500 - 12750 = \text{Rs. } 3750$

Q:34 The correct answer is **option 1 i.e. Rs. 9750.**

Total expenditure on Rabbit = $1500 + 2500 + 2750 +$
1750 = Rs. 8500

Total expenditure on Dog = $2250 + 3500 + 2000 +$
2500 = Rs. 10250

Total expenditure on Cat = $1500 + 2250 + 3500 +$
3250 = Rs. 10500

Total expenditure combined = $8500 + 10250 + 10500 =$
Rs. 29250

Average = Sum of the observations/Total observations

Average expenditure on each pet = $29250/3 = \text{Rs. } 9750$

Q:35 The correct answer is **option 4 i.e. 83%.**

Total expenditure on Rabbit = $1500 + 2500 + 2750 +$
1750 = Rs. 8500

Total expenditure on Dog = $2250 + 3500 + 2000 +$
2500 = Rs. 10250

The relative percentage of expenditure on
Rabbit compared to Dog = $8500/10250 \times 100$

$\Rightarrow 82.92\% \approx 83\%$

Q:36 The correct answer is **option 3 i.e. 19%**

Total revenue collected from parking lots R and S =
 $10200 + 8400 + 7200 + 4800 = 30600$

Total revenue collected from parking lots P and Q =
 $12000 + 5500 + 9500 + 10800 = 37800$

Required percentage = $[(37800 - 30600)/37800] \times 100$
= 19% (Approx.)

Q:37 The correct answer is **option 4 i.e. 125.**

Revenue collected from parking lot P by selling tickets
for car parking = 12000

Revenue collected from parking lot P by selling tickets
for bike parking = 5500

Suppose per ticket costs of car and bike parking in
parking lot P are 16x and 11x respectively.

$\Rightarrow 12000/16x + 5500/11x = 625$

$\Rightarrow 750/x + 500/x = 625$

$\Rightarrow 1250/x = 625$

$\Rightarrow x = 2$

Difference between the number of bikes and cars in the
parking = $12000/16x - 5500/11x$

$\Rightarrow 250/x$

$\Rightarrow 250/2 = 125$

Q:38 The correct answer is **option 2 i.e. Rs. 18.**

Revenue collected from parking lot Q by selling tickets
for car parking = 9500

Revenue collected from parking lot Q by selling tickets
for bike parking = 10800

Suppose per ticket cost of bike parking = Rs. x

$\Rightarrow 9500/25 + 10800/x = 980$

$\Rightarrow 380 + 10800/x = 980$

$\Rightarrow 10800/x = 600$

$\Rightarrow x = 18$

So, per ticket cost of bike parking = Rs. 18

Q:39 The correct answer is **option 1** i.e. **340**.

Revenue collected from parking lot R by selling tickets for car parking = 10200

Revenue collected from parking lot R by selling tickets for bike parking = 8400

Total vehicles in parking lot R = $10200/30 + 8400/15 = 340 + 560 = 900$

Revenue collected from parking lot S by selling tickets for car parking = 7200

Revenue collected from parking lot S by selling tickets for bike parking = 4800

Total vehicles in parking lot S = $7200/30 + 4800/15 = 240 + 320 = 560$

Difference of total number of vehicles (Cars + Bikes) in both the parking lots = $900 - 560 = 340$

Q:40 The correct answer is **option 4** i.e. **Rs. 2350**.

Average amount of revenue collected from 4 parking lots by selling tickets for car parking

$$\Rightarrow [12000 + 9500 + 10200 + 7200]/4$$

$$\Rightarrow 38900/4 = \text{Rs. } 9725$$

Average amount of revenue collected from 4 parking lots by selling tickets for bike parking

$$\Rightarrow [5500 + 10800 + 8400 + 4800]/4$$

$$\Rightarrow 29500/4 = \text{Rs. } 7375$$

$$\text{Required difference} = 9725 - 7375 = \text{Rs. } 2350$$

Q:41 The correct answer is **Option 1** i.e. **20**.

Total Marks of Animesh = $70 + 80 + 60 + 85 = 295$

Total Marks of Manish = $55 + 85 + 70 + 65 = 275$

Total Marks of Subhendu = $85 + 65 + 70 + 55 = 275$

Hence Animesh is the top scorer and Subhendu needs, $295 - 275 = 20$ marks

Q:42 The correct answer is **Option 2** i.e. **29 : 27**.

Marks obtained by Animesh in Maths and English = $60 + 85 = 145$

Marks obtained by Manish in Maths and English = $70 + 65 = 135$

$$\text{Ratio} = 145 : 135 = 29 : 27$$

Q:43 The correct answer is **Option 2** i.e. **Chemistry**.

The subject in which all three students have performed well jointly can be termed as high scoring.

$$\text{Physics} = 85 + 70 + 55 = 210$$

$$\text{Chemistry} = 85 + 80 + 65 = 230$$

$$\text{Maths} = 70 + 70 + 60 = 200$$

$$\text{English} = 85 + 65 + 55 = 205$$

In chemistry students have got combined highest marks, hence it is the highest scoring subject.

Q:44 The correct answer is **Option 4** i.e. **None of these**.

Total marks by Subhendu = $85 + 65 + 70 + 55 = 275$

Total marks by Manish = $55 + 85 + 70 + 65 = 275$

Since marks of both of them are exactly the same, the percentage difference among their marks is 0.

Q:45 The correct answer is **Option 3** i.e. **281.66**.

Total marks by subhendu: $85 + 65 + 70 + 65 = 275$

Total marks by Animesh: $70 + 80 + 60 + 85 = 295$

Total marks by Manish: $55 + 85 + 70 + 65 = 275$

$$\text{Average} = (275 + 295 + 275)/3$$

$$\Rightarrow 845/3 = 281.66$$

Q:46 The correct answer is **Option 2** i.e. **4,23,000**

Number of female passengers on Tuesday = 60000

Female passengers increased by 40% on Tuesday i.e. 40% of 60000 = 24000

Hence, the total number of female passengers on Tuesday = 84000

Number of female passengers on Wednesday = 70000

Female passengers increased by 20% on Wednesday i.e. 20% of 70000 = 14000.

So the total number of female passengers on Wednesday = 84000

The new total number of female passengers = $70000 + 85000 + 84000 + 84000 + 100000 =$

$$423000$$

Q:47 The correct answer is **Option 1** i.e. **12.83%**

The average number of female passengers = $(70000 + 85000 + 60000 + 70000 + 100000)/5 = 77000$

The total number of passengers = $120000 + 150000 + 110000 + 140000 + 180000 = 600000$

The required percentage = $(X/100) \times 600000 = 77000$

$$X = (77000 \times 100)/600000 = 12.83\%$$

Q:48 The correct answer is **Option 3** i.e. **1,05,000**

The total number of passengers who travel on Friday = 120% of 1,40,000 = 1,68,000

The ratio between male and female passengers is 3 : 5

So the part of female passengers is 5/8.

The number of female passengers = $168000 \times (5/8) = 1,05,000$

Q:49 The correct answer is **Option 4** i.e. **50%**.

The total number of male passengers who travel on Tuesday and Wednesday = $50,000 + 70,000 = 1,20,000$

The number of male passengers who travel on Thursday = 80,000

Required Percentage = $(1,20,000 - 80,000)/80,000 \times 100 = (40,000/80,000) \times 100 = 50\%$

Q:50 The correct answer is **Option 4** i.e. **59.47%**

Number of male passengers on Thursday = total number of passengers - the total number of female passengers = $180000 - 100000 = 80000$

Total number of passengers on Monday = 150000

Combined = $150000 + 80000 = 230000$

The total number of female passengers = $70000 + 85000 + 60000 + 70000 + 100000 = 385000$

Required percentage = $(X/100) \times 385000 = 230000$

$$X = (230000 \times 100)/385000 = 59.47\%$$

Q:51 The correct answer is **option 3** i.e **250**.

Number of copies sold of The Hindu on Friday = 400

Number of copies sold of Times Of India on Wednesday = 150

Required difference = $400 - 150 = 250$

Q:52 The correct answer is **option 3 i.e 300.**

Average number of copies sold of Times of India in given days = $(300 + 250 + 150 + 200 + 350)/5 = 250$
So, the number of copies sold of Times of India on Saturday = $250 \times 1.2 = 300$

Q:53 The correct answer is **option 4 i.e 80%.**

Number of copies sold of The Hindu on Wednesday = 200
Number of copies sold of The Indian Express on Thursday = 250
Therefore, required percentage = $(200/250) \times 100 = 80\%$

Q:54 The correct answer is **option 1 i.e 2 : 3.**

Number of copies sold of Times Of India on Tuesday and Wednesday = $250 + 150 = 400$
Number of copies sold of The Indian Express on Monday and Wednesday = $200 + 400 = 600$
Therefore, required ratio = $400 : 600 = 2 : 3$

Q:55 The correct answer is **option 3 i.e 280.**

Required average = $(250 + 300 + 200 + 250 + 400)/5 = 280$

Q:56 The correct answer is **Option 1 i.e. 390.**

Fire extinguishers sold by company A = $(80 + 140 + 120 + 110) = 450$
Fire extinguishers sold by company B = $(50 + 80 + 60 + 140) = 330$
Required average = $(450 + 330)/2 = 780/2 = 390$

Q:57 The correct answer is **Option 4 i.e. None of these.**

The number of fire extinguishers sold by company X in 2022 = 110
The number of fire extinguishers sold by the 2 companies combined in 2022 = $(110 + 140) = 250$
Required percentage = $110/250 \times 100 = 44\%$

Q:58 The correct answer is **Option 2 i.e. 5 : 2.**

The number of fire extinguishers sold by company X in 2019 and 2021 = $(80 + 120) = 200$
The number of fire extinguishers sold by company Y in 2020 = 80
Required ratio = $200 : 80 = 5 : 2$

Q:59 The correct answer is **Option 4 i.e. 100.**

Fire extinguishers sold by company Y in 2021 = 60
Fire extinguishers sold by company Y in 2022 = 140
Required average = $(60 + 140)/2 = 200/2 = 100$

Q:60 The correct answer is **Option 2 i.e. 10.**

Total number of fire extinguishers sold by company X in 2019 and 2020 combined = $80 + 140 = 220$
Total number of fire extinguishers sold by company X in 2021 and 2022 combined = $120 + 110 = 230$
Required difference = $230 - 220 = 10$

Q:61 The correct answer is **option 3 i.e.17315**

Here the people who died is irrelevant in the given context as we are dealing with only who are consuming only alcohol.

The number of people who consume alcohol only now in Lucknow
 $= [40000 - 25000 + 2315] = 17315$

Q:62 The correct answer is **option 4 i.e. 38750**

Total number of people who consume only cigarettes in four cities
 $= [(65000 - 25000) + (50000 - 15000) + (45000 - 10000) + (65000 - 20000)]$
 $= 40000 + 35000 + 35000 + 45000$
 $= 155000$

Hence, average = $155000/4 = 38750$

Q:63 The correct answer is **option 1 i.e. 164.2%**

Total number of people who consume cigarette in Lucknow and Kanpur
 $= 65000 + 50000 = 115000$

And
Total number of people who consume alcohol in Lucknow and Kanpur
 $= 40000 + 30000 = 70000$
Hence, required percentage = $[115000/70000] \times 100 = 164.2\%$

Q:64 The correct answer is **option 3 i.e. 140000**

Number of people who either consume cigarette or alcohol = Number of people who consume cigarette + Number of people who consume alcohol – Number of people who consume both
So,

Sum of number of people who either consume cigarette or alcohol in Agra and Meerut
 $= [45000 + 25000 - 10000] + [65000 + 35000 - 20000]$
 $= 60000 + 80000 = 140000$
Hence, correct answer is **140000.**

Q:65 The correct answer is **option 2 i.e. 7 : 3**

Since, The people who consume both cigarette and alcohol are included in the number of people who consume cigarette and the number of people who consume alcohol.

Total number of people who consume cigarette only in Kanpur and Agra
 $= [(50000 - 15000) + (45000 - 10000)]$
 $= 35000 + 35000 = 70000$

And
Total number of people who consume alcohol only in Lucknow and Meerut
 $= [(40000 - 25000) + (35000 - 20000)]$
 $= 15000 + 15000 = 30000$
Hence, required ratio = $70000 : 30000 = 7 : 3$

Q:66 The correct answer is **option 2 i.e. 4.**

For city A:

$$\text{Number of male} = \text{Total population} - \text{Female population}$$

$$\Rightarrow 3580000 - 1118750 = 2461250$$

$$\text{Sex ratio} = 1118750/2461250$$

$$\Rightarrow 5/11$$

When female population is doubled

$$\text{Sex ratio} = 10/11$$

$$(3a - 2) / (4a - 5) = 10/11$$

$$33a - 22 = 40a - 50$$

$$28 = 7a$$

$$\therefore a = 4$$

Q:67 The correct answer is **option 4 i.e. 296000.**

$$\text{Total population of F} = (4300000 + 4250000 + 5130000)/3$$

$$\Rightarrow 4560000$$

$$\text{Female population of F} = (2280000 + 1984000)/2$$

$$\Rightarrow 2132000$$

$$\text{Male population} = 4560000 - 2132000$$

$$\Rightarrow 2428000$$

$$\text{Difference between male population and female population} = 2428000 - 2132000$$

$$\Rightarrow 296000$$

Q:68 The correct answer is **option 4 i.e. 1.8.**

For city B:

$$\text{Number of males} = \text{Total population} - \text{Female population}$$

$$\Rightarrow 4300000 - 2150000 = 2150000$$

$$\text{Required ratio} = 2150000/2150000$$

$$\Rightarrow 1$$

For city D:

$$\text{Number of males} = \text{Total population} - \text{Female population}$$

$$\Rightarrow 5130000 - 2280000 = 2850000$$

$$\text{Required ratio} = 2280000/2850000$$

$$\Rightarrow 0.8$$

$$\text{Sum of sex ratio} = 1 + 0.8$$

$$\Rightarrow 1.8$$

Q:69 The correct answer is **option 2 i.e. 3 : 2.**

The only city with more female population than male is city C

$$\text{Number of male} = \text{Total population} - \text{Female population}$$

$$\Rightarrow 4250000 - 2550000 = 1700000$$

$$\text{Required ratio} = 2550000 / 1700000$$

$$\Rightarrow 3: 2$$

Q:70 The correct answer is **option 1 i.e. 2427450.**

$$\text{Average population of the cities} = (3580000 + 4300000 + 4250000 + 5130000 + 4960000)/5$$

$$\Rightarrow 4444000$$

$$\text{Average female population} = (1118750 + 2150000 + 2550000 + 2280000 + 1984000)/5$$

$$\Rightarrow 2016550$$

$$\text{Average male population} = \text{Average population} - \text{Average female population}$$

$$\Rightarrow 4444000 - 2016550$$

$$\Rightarrow 2427450$$

Q:71 The correct answer is **Option 3 i.e. 53.3**

Average score of 36 students of Class 4 is 52.

As the marks of few students increased and decreased.
Sum of the score of 36 students = Average score × no. of students

$$= 52 \times 36 = 1872$$

$$\text{The new sum of score of 36 students} = 1872 + 34 + 28 + 10 - 16 - 10 = 1918$$

$$\text{Thus, new average score} = \frac{\text{New sum of score}}{\text{total no. of students}} = \frac{1918}{36} = 53.3\%$$

Q:72 The correct answer is **Option 2 i.e 60%.**

Total students = 60

Ratio of students in class 4 and 5 = 3:2

No. of students in class 4 and 5 will be 36 and 24 respectively.

Average score of class 4 and class 5 is 64 and 54 respectively.

Total score of class 4 = Average score × number of students = $64 \times 36 = 2304$

Total score of Class 5 = $54 \times 24 = 1296$

Total score of all 60 students of Class 4 and 5 = $(2304 + 1296) = 3600$

So, Average score of all 60 students = Total score of all 60 students / Total students
 $= 3600/60 = 60\%$

Q:73 The correct answer is **Option 1 i.e. 28.57%.**

Let the number of students in 3 sections be $2x, 3x, 4x$ and the ratio of average marks be $4y, 3y, y$.

$$\text{Average marks of class} = (8xy + 9xy + 4xy)/(2x + 3x + 4x) = 7y/3$$

$$\text{Thus percentage increase} = [(3y - 7y/3)/(7y/3)] \times 100 = 28.57\%$$

Q:74 The correct answer is **Option 3 i.e. 78.42**

Average score of class 5 students in UT-2 = 72

According to question,

$72 = 75\%$ of total average marks

$$\Rightarrow \text{Total average marks} = 72 \times 4/3 = 96$$

$$\text{Total score of class 5 students in UT-2} = 72 \times 40 = 2880$$

$$\text{Now 3 students are removed ,then total score} = 2880 - (32 + 28 + 34) = 2786$$

$$\text{Now new average score of 37 students} = 2786/37 = 75.29$$

$$\text{New average percentage of class 5 in UT-2} = 75.29/96 \times 100 = 78.42\%$$

Q:75 The correct answer is **Option 2 i.e. 60%**

Let the number of students in class 4 be $3x$ and class 5 be $2x$.

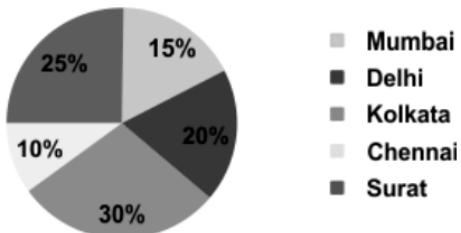
$$\text{Required percentage} = (3x)/(3x + 2x) \times 100$$

$$\Rightarrow 300/5 = 60\%$$

PIE CHART

Direction (Q1 – Q5): The pie chart given below shows the percentage of people going to different cities for shopping. The total number of people taken here is 5000.

Percentage of people visiting different cities for shopping



Study the pie chart carefully and answer accordingly.

Q:1 If the number of people who visit Mumbai bought a pair of clothes of total costing Rs. 9,00,000, then find the price of each pair of clothes.

- | | |
|-------------|-------------|
| 1. Rs. 500 | 2. Rs. 1000 |
| 3. Rs. 1500 | 4. Rs. 1200 |

Q:2 10% of persons who came to Chennai purchased Rs. 2000. Find the total expenditure on the purchases made by them.

- | | |
|------------------|-----------------|
| 1. Rs. 50,000 | 2. Rs. 1,00,000 |
| 3. Rs. 10,00,000 | 4. Rs. 2,50,000 |

Q:3 What is the total number of people going to Mumbai, Kolkata, and Chennai?

- | | |
|---------|---------|
| 1. 2500 | 2. 2750 |
| 3. 2570 | 4. 3500 |

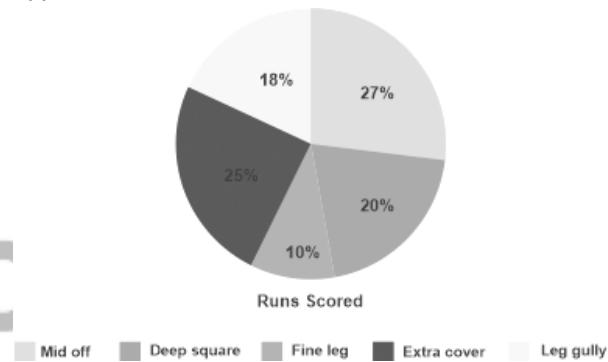
Q:4 30% of people who decided to visit Delhi canceled their plan and decided to visit Surat. What will be the total number of people visiting Surat?

- | | |
|---------|---------|
| 1. 1250 | 2. 1300 |
| 3. 1570 | 4. 1550 |

Q:5 What is the average number of people visiting Delhi, Kolkata, and Chennai?

- | | |
|---------|--------|
| 1. 1000 | 2. 750 |
| 3. 500 | 4. 450 |

Directions (Q6 – Q10): The following pie chart shows the runs scored by Virat Kohli in different segments of the field in a match. Two values X and Y are missing in the pie chart. X is the percentage of runs scored in the mid-off area and Y is the percentage of runs scored in the leg gully area. The central angle made by the runs scored in the mid-off area in the pie chart is 97.2° . find both the values of X and Y and solve the following questions. The total runs scored by Virat in the match is 200.



Q:6 The run made in the deep square is what percent of the total runs made in the mid-off area and extra cover area?

- | | |
|-----------|-----------|
| 1. 38.46% | 2. 28.46% |
| 3. 20.20% | 4. 32.25% |

Q:7 What is the sum of which two numbers is closest to the average runs scored by Virat?

- | | |
|--------------|--------------|
| 1. 36 and 20 | 2. 54 and 40 |
| 3. 50 and 20 | 4. 40 and 20 |

Q:8 The total runs scored in the mid-off area and the leg gully area is what percent more than the average of the runs scored?

- | | |
|-----------|-----------|
| 1. 25.28% | 2. 55.56% |
| 3. 32.33% | 4. 14.56% |

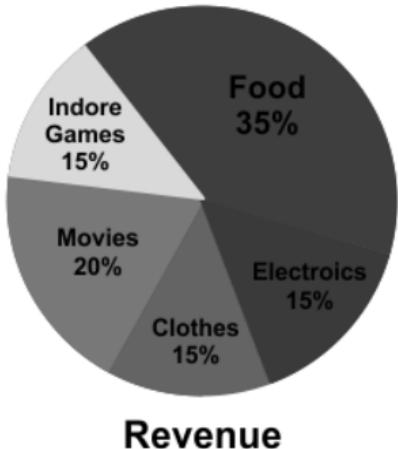
Q:9 The total run scored in the mid-off area is what percent more or less than the average runs scored by Virat?

- | | |
|----------------|----------------|
| 1. 25.92% more | 2. 14.25% less |
| 3. 25.25% more | 4. 14.36% less |

Q:10 What Is the runs scored in the leg gully area?

- | | |
|-------|-------|
| 1. 35 | 2. 36 |
| 3. 25 | 4. 15 |

Direction (Q11 – Q15): A shopping mall's revenue was generated through 5 different sectors - food, Electronics, Clothes, movies and indoor games. The total revenue is RS.985,000. Study the following table carefully and answer to the question given below.



Q:11 Find the revenue on Clothes and Indoor games is what percent of the revenue on Food.

1. 71.75%
2. 67.66%
3. 52.53%
4. 85.71%

Q:12 Find the average of the revenue on Movies, Clothes and Electronics goods.

1. 64,166.66
2. 150,333.36
3. 604,133.33
4. 164,166.66

Q:13 Find the compound interest, if the cost price of food is given to the customer for 3 years at a rate of 10%. Here the revenue is 25% more than the cost price.

1. RS.28039.8
2. RS.12889.8
3. RS.91289.8
4. RS.87621.8

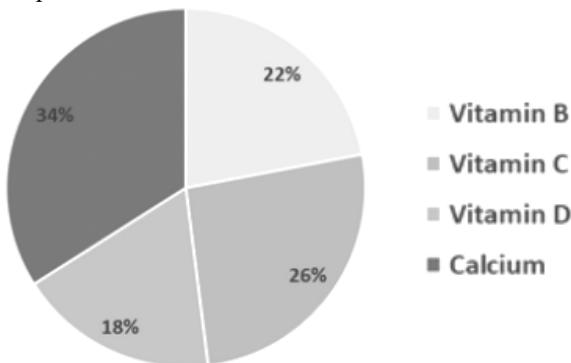
Q:14 Find the difference in the revenue on Movies and Indoor games.

1. 55,250
2. 49,250
3. 40,000
4. 32,222

Q:15 Find the ratio of the cost price of Electronics goods and Clothes, if both sell on the profit of 20% and 15%.

1. 123,125/128,478
2. 112,235/112,118
3. 123,111/128,111
4. 145,253/111,321

Direction (Q16 – Q20): The Pie chart below shows the percentage of total people who visited a hospital in a month who lacked Vitamin B, C, D, and Calcium. Total number of persons who visited the hospital in that month is 1250. Study the pie chart carefully and answer the question that follows.



Q:16 What is the angle corresponding to the percentage of people who lack calcium in the pie chart?

1. 115.2°
2. 129.6°
3. 122.4°
4. 112.4°

Q:17 Of the people lacking vitamin D, 36% also lack vitamin A. If there are 214 people who lack vitamin A, then find the number of people who lack vitamin A only.

1. 138
2. 143
3. 127
4. 133

Q:18 $\frac{9}{17}$ of the people who lack calcium took medicine and controlled the level of calcium then, find the number of people who have not controlled the level of calcium.

1. 175
2. 200
3. 300
4. 225

Q:19 The ratio between the total number of males and females who lack Vitamin B and the total number of males and females who lack vitamin D is 3 : 2. If 169 males lack vitamin B then, how many males lack vitamin D?

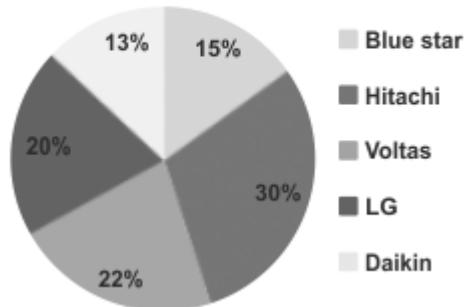
1. 137
2. 141
3. 143
4. 131

Q:20 Out of the people who lack Vitamin C, 44% were male. Find the number of females who visited the hospital due to lack of Vitamin C.

1. 182
2. 184
3. 196
4. 172

Directions(Q21 – Q25): The pie chart given below shows the percentage distribution of the air conditioners sold by Aditya electronic store in 2024. It was found that the total sales of the air conditioners in that particular year was 5000.

The percentage of distribution of AC's sold in 2024



Q:21 If the Cost price of each Daikin AC is Rs. 20,000 and 25 ACs are sold to a school. If Aditya electronic store got an overall loss of Rs. 55,000, then find the selling price of each AC.

1. Rs. 17,800
2. Rs. 18,200
3. Rs. 17,500
4. Rs. 19,200

Q:22 In the year 2025, the sales of Air conditioners rose to 6150. By what percentage did the sales increase in comparison to the previous year?

1. 15%
2. 27%
3. 40%
4. 23%

Q:23 What is the ratio of total sales of Blue star, LG, and Daikin to that of total sales of Hitachi and Voltas?

1. 18 : 19
2. 11 : 12
3. 29 : 30
4. 12 : 13

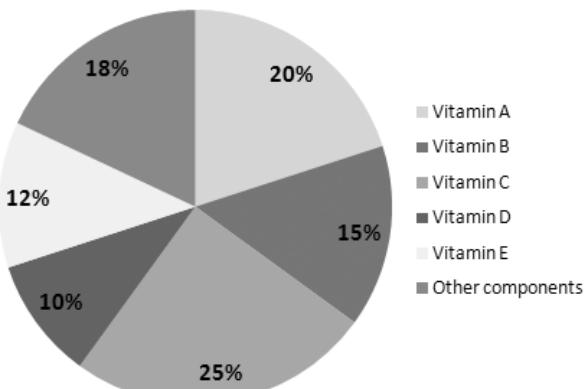
Q:24 If the cost price of each Blue star air conditioner is Rs.10,000 and it is sold at 15% profit, then find the total selling price of all the Blue star air conditioners.

1. Rs. 86,00,000
2. Rs. 86,50,000
3. Rs. 86,25,000
4. Rs. 86,20,000

Q:25 What is the average sales of Hitachi, LG, and Daikin?

1. 1250
2. 1050
3. 3050
4. 2150

Direction (Q26 – Q30): The pie chart below shows the percentage distribution of vitamins (A, B, C, D and E) and other components in a weight gaining powder.



Other components consist of protein and carbohydrate. There is 180 gm protein in 1.5 kg box of weight gaining powder. Study the data carefully and answer the questions that follow.

Q:26 Find the difference of total quantity of Vitamin A, C and E and total quantity of Vitamin B and D in the 8 kg box of the powder.

1. 2.48 kg
2. 2.36 kg
3. 2.56 kg
4. 2.24 kg

Q:27 How much quantity (Approx.) of Vitamin C is to be added in a 3 kg powder box such that the percentage of Vitamin C increases to 30%?

1. 214 gm
2. 225 gm
3. 208 gm
4. 200 gm

Q:28 In a 5 kg box of powder, some quantity of Vitamin K is also added such that the percentage of Vitamin E becomes 100/9%. Find the quantity of Vitamin K added.

1. 500 gm
2. 400 gm
3. 450 gm
4. 300 gm

Q:29 Total quantity of Vitamin A and Protein is what percentage of total quantity of Vitamin B and D in a 2 kg box of that weight gaining powder?

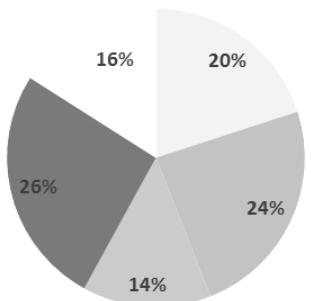
1. 112%
2. 125%
3. 132%
4. 128%

Q:30 How much carbohydrate will be there in the 2 kg box of weight gaining powder?

1. 100 grams
2. 140 grams
3. 80 grams
4. 120 grams

Directions (Q31 – Q35): Pie chart given in the question gives the average speed of five persons when they travel with their vehicles. Ratio of time of travel for these five persons is 6 : 9 : 12 : 4 : 10 and total distance travelled (all vehicles combined) is 1728 km. Sum of average speeds of all vehicles is 450 km/hr. Answer the questions that follow on the basis of given information.

Percentage Speed (Sum = 450 km/hr)



Q:31 If A and B travel 900 km with their speeds such that B travels $\frac{3}{5}$ of the total distance. Average speed (in km/hr) of both combined is?

- 1. 102 2. 98
- 3. 100 4. 104

Q:32 If the time taken by A becomes time for E, time taken by B becomes time for D, find the change in total distance covered by all of them.

- 1. 56.75 2. 56.25
- 3. 63 4. 58.5

Q:33 Find the ratio of total distance travelled by A and D to total distance travelled by B and E.

- 1. 24 : 37 2. 28 : 47
- 3. 32 : 51 4. 18 : 29

Q:34 C starts from point X towards Y at 7.30 a.m., while D starts from Y towards X at some other time. They meet each other at 2.30 p.m. They meet each other at point Z, Distance XZ (in km) is?

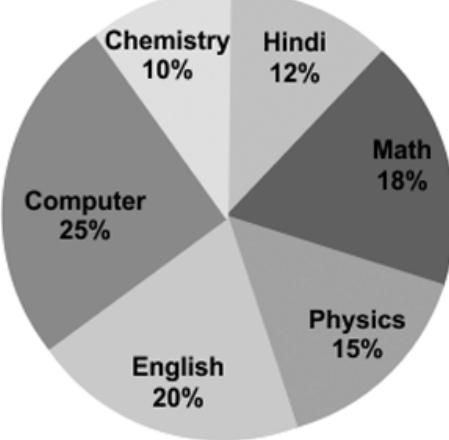
- 1. 458 2. 447
- 3. 441 4. 465

Q:35 Find the average distance traveled by B, C and D (in km).

- 1. 373 2. 366
- 3. 358 4. 362

Direction (Q36 – Q40): The pie chart given below shows the total number of passed candidates in different subjects in a class. Study the following pie chart carefully & answer the following questions.

Total number of passed students = 12000



Q:36 If the number of failed students in Hindi is 25% more than number of passed students in Hindi, then number of failed students in Hindi is what percent of number of passed students in English?

- 1. 80% 2. 75%
- 3. 55% 4. 60%

Q:37 If total number of student who had taken exam of physics are 4000, then find ratio of number of failed students in physics to number of passed students in chemistry.

- 1. 11 : 6 2. 13 : 6
- 3. 11 : 5 4. 3 : 2

Q:38 If the total number of passed students are 25% of the total number of student in the class, then total number of failed student is how much more/less than total number of passed students in computer, Math & Hindi together?

- 1. 28,800 2. 27,400
- 3. 26,200 4. 29,400

Q:39 Total number of passed students in English & physics together is what percent more/less than total number of passed students in chemistry & Hindi together?

- 1. $57\frac{1}{11}\%$
- 2. $59\frac{1}{11}\%$
- 3. $51\frac{2}{3}\%$
- 4. $43\frac{2}{5}\%$

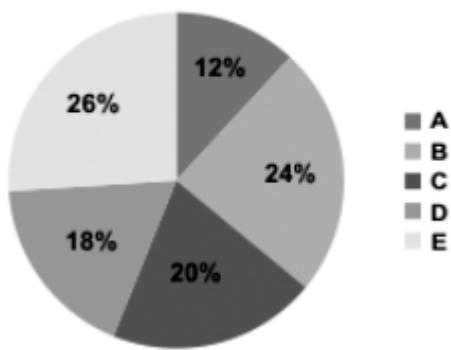
Q:40 If the ratio of total number of passed to total number of students in class is 2 : 5 and the percentage distribution of failed students is same as that of the passed students in the class, then find average number of failed student in chemistry & English.

- 1. 2200 2. 3200
- 3. 1500 4. 2700

Directions (Q41 – Q50): Answer the questions based on the information given below.

The pie chart given below shows the percentage distribution of the number of salons present in five different areas (A, B, C, D, and E) with respect to the total number of salons present in all five areas together.
Note: Total number of salons in areas A and E combined = 228

Percentage distribution of the number of salons



Q:41 If the average number of haircuts and shaves done per day by each salon of area E is 15 and 12 respectively and the cost of each haircut and each shave is Rs. 5 and Rs. 2 respectively, then find the total revenue generated by all the salons of area E together by haircuts and shaves per day.

1. Rs 14688
2. Rs 15444
3. Rs 16456
4. Rs 12488

Q:42 If the average number of barbers in each salon of area A is 4, then find the total number of barbers in all the salons together of area A.

1. 256
2. 288
3. 280
4. 300

Q:43 The number of salons in area A is what percentage of the number of salons in area E?

1. 46%
2. 49%
3. 43%
4. 52%

Q:44 If $\frac{4}{9}$ of the total number of salons in area D are Unisex salons, then find the number of Unisex salons in area D.

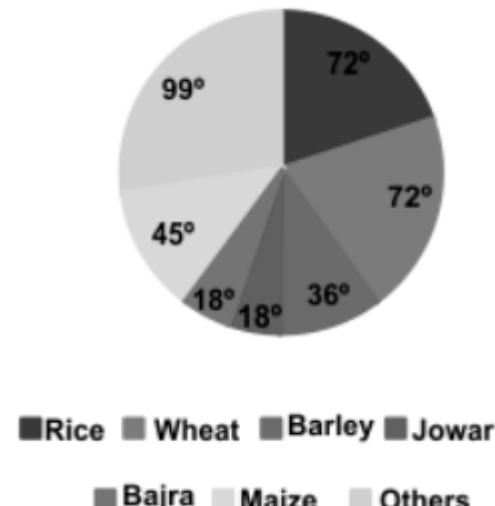
1. 60
2. 36
3. 48
4. 56

Q:45 Find the difference between the number of salons in area B to that of the same in area C.

1. 18
2. 32
3. 30
4. 24

Directions (Q46 – Q50): The pie chart below shows the land distribution(in degrees) in a village under various food crops - Rice, Wheat, Barley, Jowar, Bajra, Maize, and others. Study the pie chart carefully and answer the questions below.

Distribution of Area (In Acres) under various food crops



Q:46 If the total area goes up by 5%, and the area under wheat production goes up by 12%, then what will be the angle for wheat in the new pie-chart?

1. 62.4°
2. 76.8°
3. 80.6°
4. 84.2°

Q:47 Combination of which three crops (except others) contributes to 50% of the total area under the food crops?

1. Wheat, Barley and Jowar
2. Rice, Wheat and Jowar
3. Rice, Wheat and Barley
4. Bajra, Maize and Rice

Q:48 If the total area under jowar was 1.5 million acres, then what was the area (in million acres) under rice?

1. 6
2. 7.5
3. 9
4. 4.5

Q:49 If the production of wheat is 6 times that of barley, then what is the ratio between the yield per acre of wheat and barley?

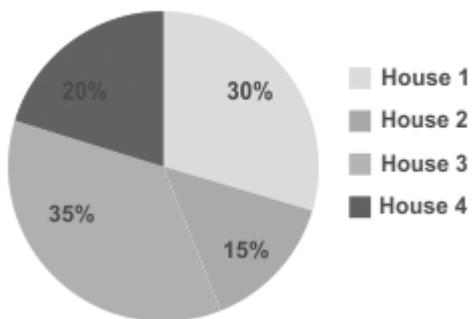
1. 3 : 2
2. 3 : 1
3. 12 : 1
4. 1 : 12

Q:50 If the yield per acre of rice was 50% more than that of barley, then the production of barley is what percent of that of rice?

1. 30%
2. $(100/3)\%$
3. 35%
4. 36%

Directions (Q51 – Q55): The following pie chart shows the electricity bill of 4 houses in a colony. The total bill amounts to Rs. 4000.

Electricity Bill



Study the following pie chart carefully and answer accordingly.

Q:51 What is the total bill of House 1 and House 3 (in Rs.)?

- 1. 2600
- 2. 2500
- 3. 2100
- 4. 2700

Q:52 If electricity consumption for House 2 and House 4 was 10% and 20% more respectively in the following month, what will be their total consumption in the following month (in Rs.)?

- 1. 2200
- 2. 2500
- 3. 1620
- 4. 3000

Q:53 What is the ratio of bill amounts of House 1 and House 2?

- 1. 5 : 4
- 2. 2 : 3
- 3. 2 : 5
- 4. 2 : 1

Q:54 If the charges for 200 units is Rs. 800. What will be the total units if the bill costs Rs. 2500?

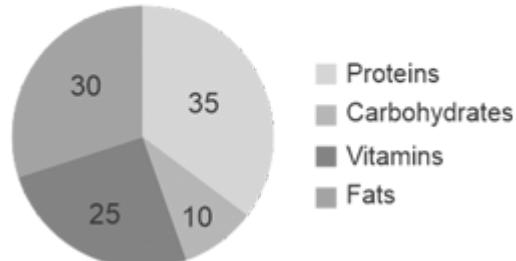
- 1. 625 units
- 2. 500 units
- 3. 350 units
- 4. 445 units

Q:55 The bill amount of House 3 is approximately what percent of the total bill amounts of House 1 and House 2?

- 1. 57%
- 2. 70%
- 3. 65%
- 4. 78%

Directions (Q56 – Q60): The pie chart given below shows the percentage distribution of different nutrients in a weight gain powder of 1 kg.

Percentage distribution of nutrients in a weight gain powder



Study the graph carefully and answer accordingly.

Q:56 What percent of Vitamins is present in the powder with respect to all other nutrients?

- 1. 25.25%
- 2. 33.33%
- 3. 45%
- 4. 15.35%

Q:57 If a person is instructed by the physician to take 210 gms of proteins. For how many days he has to take the powder to a total intake of 210 gms of proteins if he takes 2 scoops every day? (1 scoop contains 10 gm of weight)

- 1. 30 days
- 2. 43 days
- 3. 20 days
- 4. 32 days

Q:58 The cost of 1 kg powder is Rs.250. If a person pays only 70% of the total amount, then find the effective amount the customer pays for proteins in 5 kg powder.

- 1. Rs. 400
- 2. Rs. 375
- 3. Rs. 250
- 4. Rs. 350

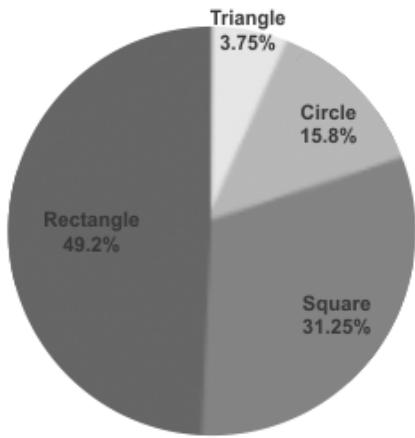
Q:59 What is the ratio of the total amount of proteins and fats to the total amount of carbohydrates and vitamins?

- 1. 13 : 7
- 2. 5 : 11
- 3. 11 : 13
- 4. 14 : 17

Q:60 If a person has taken 3 kg of powder, then what will be his average intake of Carbohydrates, fats, and minerals?

- 1. 500 gms
- 2. 650 gms
- 3. 750 gms
- 4. 900 gms

Directions (Q61 – Q65): A designer decorates an office with 4 different types of 2-D shapes Triangle, Circle, Square, and Rectangle. The following pie chart shows the percentage area in which each shape is used. Study the pie chart carefully and answer the questions that follow. Given the total area of all shapes is 2000 cm².



Q:61 If the cost of decorating a circular part per cm² is Rs. 28, a triangular part per cm² is Rs. 42, and a rectangular part per cm² is Rs.37, then find the total cost of decorating these 3 parts.

1. Rs. 57203
2. Rs. 46579
3. Rs. 34455
4. Rs.48406

Q:62 Find the ratio of the sum of the area of the Circle and Rectangle to the sum of the area of the Triangle and Square.

1. 13 : 9
2. 13 : 7
3. 19 : 7
4. 17 : 8

Q:63 If one side of the rectangle is equal 57.12% of the height of the triangle then, find the second side of the rectangle. Also, the height of the triangle is 2/5th of the side of the square.

1. 172.2 cm
2. 150.5 cm
3. 193 cm
4. 173cm

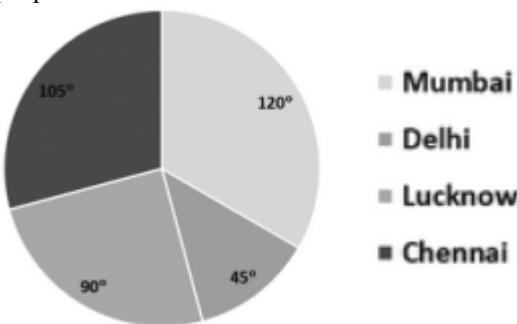
Q:64 If the height of the triangle is 2/5th of the side of the square, then find the ratio of the base of the triangle and the side of the square.

1. 3 : 8
2. 3 : 5
3. 5 : 8
4. 5 : 3

Q:65 Find the average area of Circle, Square, and Rectangle.

1. 675.67 cm²
2. 641.76cm²
3. 741.67cm²
4. 641.67 cm²

Direction (Q66 – Q70): The pie chart given below shows the distribution in the degree of the number of people who travel from Kolkata to four different cities.



Q:66 The total number of persons traveling from Kolkata to all four cities together is 16200, then what is the difference between persons traveling to Delhi and Chennai?

1. 2800
2. 2600
3. 2500
4. 2700

Q:67 If persons travelling to Chennai are 960 more than those travelling to Lucknow. What is the average of persons travelling from Kolkata to Mumbai, Delhi, and Lucknow?

1. 6240
2. 5440
3. 4860
4. 3680

Q:68 If the total number of persons traveling from Kolkata to Delhi and Lucknow is 8100, then what is the difference between the total persons traveling from Kolkata to Mumbai and Chennai?

1. 900
2. 750
3. 1200
4. 1050

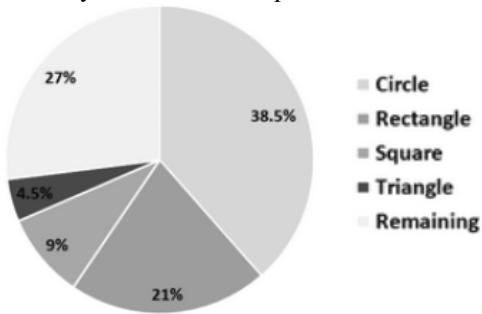
Q:69 What is the ratio of the total persons traveling from Kolkata to Delhi and Chennai together to the persons traveling from Kolkata to Mumbai and Lucknow together?

1. 10 : 11
2. 9 : 11
3. 3 : 5
4. 5 : 7

Q:70 If the difference between persons travelling from Kolkata to Mumbai and Kolkata to Chennai is 1200, then total how many persons travel from Kolkata to all four cities together?

1. 28800
2. 32400
3. 19600
4. 20800

Direction (Q71 – Q75): Inside a large square of side 30 cm, four figures are drawn: Circle, Rectangle, Square and Triangle. The Pie chart below shows the percentage of total area (of square) occupied by these figures and also the percentage of remaining area. Study the chart carefully and answer the questions that follow.



Q:71 What is the circumference of the circle drawn?

1. 55 cm
2. 132 cm
3. 110 cm
4. 66 cm

Q:72 If the length of the rectangle is 12 cm more than the breadth then find the perimeter of the rectangle.

1. 50 cm
2. 70 cm
3. 40 cm
4. 60 cm

Q:73 If the triangle drawn is a right-angle triangle with base equal to perpendicular then find the hypotenuse of the triangle.

1. $7\sqrt{3}$ cm
2. $3\sqrt{3}$ cm
3. $9\sqrt{2}$ cm
4. $6\sqrt{2}$ cm

Q:74 If maximum number of smaller squares are drawn inside the larger square (No other figure is drawn) then how much area will be remaining in the larger square?

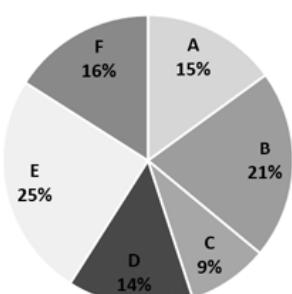
1. 171 cm^2
2. 177 cm^2
3. 127 cm^2
4. 163 cm^2

Q:75 How much percentage of the remaining area can be occupied by a rectangle of size $12 \text{ cm} \times 9 \text{ cm}$?

1. 33.33%
2. 44.44%
3. 22.22%
4. 55.55%

Direction (Q76 – Q80): 6 persons A, B, C, D, E, and F participate in an online quiz and win different amounts. The pie chart below shows the percentage of the total amount won by these 6 persons. Study the chart carefully and answer the question that follows. (Total amount won by all 6 persons is Rs. 12500)

Percentage of total amount won



Q:76 A and B added the amount won by them. They spent $\frac{1}{3}$ of the amount on food, 60% of the remaining amount on entertainment. What is the remaining amount they have now?

1. Rs. 1000
2. Rs. 1200
3. Rs. 1400
4. Rs. 1250

Q:77 D adds Rs. 2550 more on the amount of money won and invested the sum on simple interest at 10% per annum for 2 years. Find the amount of interest earned by him.

1. Rs. 860
2. Rs. 820
3. Rs. 940
4. Rs. 800

Q:78 Find the ratio of the difference between the amounts won by A and C to the difference between the amounts won by D and F.

1. 5 : 4
2. 2 : 3
3. 3 : 1
4. 7 : 3

Q:79 B and E spent 60% and 80% of the amount won on shopping respectively. Find the total amount remaining with them.

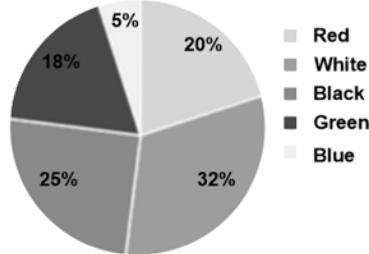
1. Rs. 1725
2. Rs. 1625
3. Rs. 1775
4. Rs. 1675

Q:80 The amounts won by C and F are divided into 3 parts in the ratios 4 : 5 : 6 and 2 : 5 : 3 respectively. Find the difference of largest part from the amount won by C and smallest part from the amount won by F.

1. Rs. 60
2. Rs. 50
3. Rs. 75
4. Rs. 100

Direction (Q81 – Q85): A painting is created using five different colours Red, White, Black, Green, and Blue and different quantities of colours are used. The pie chart shows the percentage of these colours used in the painting. The total quantity of colour used in the painting is 1.5 liters. Study the chart carefully and answer the questions that follow.

Percentage of total colour used



Q:81 $\frac{4}{9}$ of the Green colour used and 35% of the Red colour used are further used for mixing to form Brown colour. Find the quantity of Brown colour.

1. 225 ml
2. 245 ml
3. 260ml
4. 275 ml

Q:82 If the per liter cost of Red and Blue colour paint is Rs. 250 and Rs. 300, then find the total cost incurred in these two colours used for the painting.

1. Rs. 94.5
2. Rs. 92.5
3. Rs. 97.5
4. Rs. 102.5

Q:83 Find the sum of the difference of quantities of Black and Red colours used and the difference of quantities of White and Blue colours used for the painting.

- | | |
|-----------|-----------|
| 1. 440 ml | 2. 450 ml |
| 3. 520 ml | 4. 480 ml |

Q:84 Out of the total quantity of Black colour brought for painting, only 80% is used in the painting. Find the quantity of Black colour brought for painting.

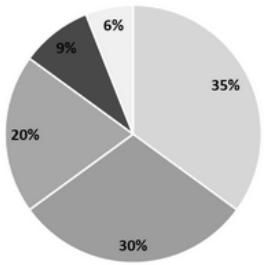
- | | |
|--------------|--------------|
| 1. 462.25 ml | 2. 472.75 ml |
| 3. 457.5 ml | 4. 468.75 ml |

Q:85 The total quantity of White and Black color paint used is how much percentage more than the total quantity of Red and Green color paint used?

- | | |
|--------|--------|
| 1. 25% | 2. 40% |
| 3. 50% | 4. 60% |

Direction (Q86 – 90): The pie chart below shows the percentage of total Covid cases in 5 different countries. The total number of Covid cases in 5 countries is 2.1 crores. Study the chart carefully and answer the question that follows.

■ USA ■ India ■ Brazil ■ Russia ■ Spain



Q:86 Total number of Covid cases in USA and Russia is how much percentage less than the total number of Covid cases in other 3 countries?

- | | |
|----------|----------|
| 1. 22.5% | 2. 20% |
| 3. 21.4% | 4. 18.6% |

Q:87 The ratio of number of Covid cases in India and Brazil becomes 14 : 9 in next 10 days. If the increase in number of Covid cases in Brazil is 3 lakhs in next 10 days then find the increase in number of Covid cases in India in next 10 days.

- | | |
|--------------|--------------|
| 1. 7.5 lakhs | 2. 7 lakhs |
| 3. 8 lakhs | 4. 6.5 lakhs |

Q:88 The average number of Covid cases in USA and Brazil is how much more than the average number of Covid cases in India, Russia and Spain?

- | | |
|----------------|----------------|
| 1. 26.25 lakhs | 2. 25.5 lakhs |
| 3. 27.5 lakhs | 4. 25.75 lakhs |

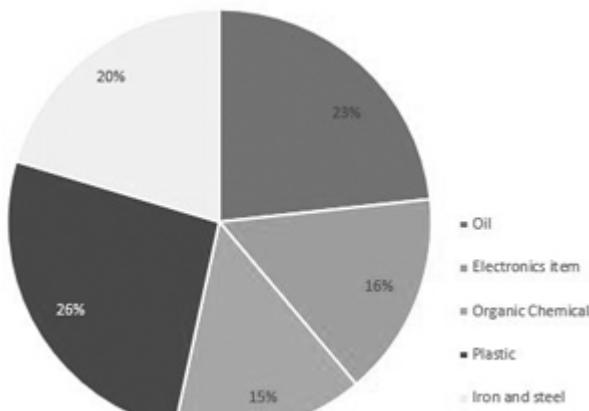
Q:89 In the next one month, the spike in the number of Covid cases in USA, India and Brazil is 10%, 30% and 70%. Which country has the highest number of Covid cases after 1 month?

- | | |
|----------|-----------------------|
| 1. USA | 2. Brazil |
| 3. India | 4. Both USA and India |

Q:90 The mortality rate due to Covid in Brazil is 3.33% and a total of 32.5 lakhs people got recovered from the Covid virus. Find the number of active Covid cases in Brazil.

- | | |
|--------------|--------------|
| 1. 7.5 lakhs | 2. 8.4 lakhs |
| 3. 8 lakhs | 4. 8.1 lakhs |

Directions (Q91 – Q95): The following pie chart gives the distribution of various top items that India imported in 2021-22. If Oil and Plastic together consist of 98,000 units of import. Read the chart and answer the questions.



Q:91 Plastic imported by India is one-third of US plastic exports in total, what is the total unit of plastic exported by the US?

- | | |
|-------------------|-------------------|
| 1. 2,07,000 units | 2. 1,62,000 units |
| 3. 1,56,000 units | 4. 1,44,000 units |

Q:92 If India's export of palm oil is 70% more than its import of oil, what is the quantity of Palm oil India exports?

- | | |
|----------------|----------------|
| 1. 64,400 unit | 2. 78,200 unit |
| 3. 82,600 unit | 4. 74,800 unit |

Q:93 If India's import of organic chemicals, animal products and precious stones are in the ratio 5 : 3 : 2, What is the total unit of precious stones imported?

- | | |
|----------------|------------------|
| 1. 14,000 unit | 2. 22,000 unit |
| 3. 16,000 unit | 4. None of these |

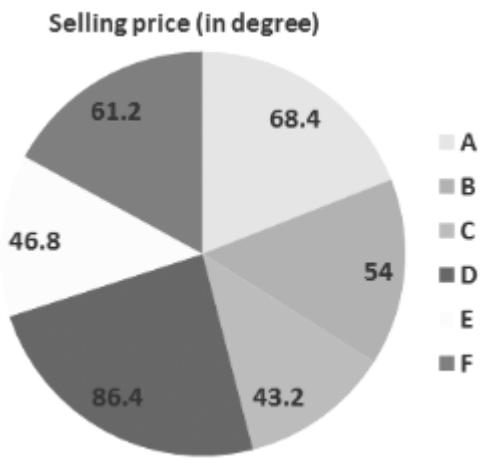
Q:94 In 2023, India's import of iron and steel was reduced by 25%, but the total import unit remains the same. What is the percentage of iron and steel imports in total imports in 2020?

- | | |
|----------|--------|
| 1. 12.5% | 2. 10% |
| 3. 17.5% | 4. 15% |

Q:95 Electronic item costs Rs. 15 per unit and oil costs Rs. 76 per unit in import. What is the combined price of total import of these two items?

- | | |
|------------------|------------------|
| 1. Rs. 44,60,000 | 2. Rs. 29,47,000 |
| 3. Rs. 34,16,000 | 4. Rs. 39,76,000 |

Directions (Q96 – Q100): Pie chart given below in the question gives the share of Selling Prices of six articles (A - F). Total selling price of all articles combined is Rs 10500. Values in pie chart are given in degrees. Read the information carefully and answer the question that follows.



Q:96 Find the ratio of sum of selling prices of B and F to the sum of selling prices of C and E.

1. 12 : 7
2. 25 : 18
3. 32 : 25
4. 25 : 16

Q:97 The profit percent on F is 16.67% and the discount is 12.5%. Find the markup percentage on F.

1. 56.4%
2. 33.33%
3. 41.55%
4. 25.5%

Q:98 Find the average of the sum of the selling price of A, B, C and E.

1. Rs 1575.25
2. Rs 1610.75
3. Rs 1525.5
4. Rs 1548.75

Q:99 The discount % on articles A and C is 12.5% and 20% respectively. Find the combined Marked prices of A and C.

1. Rs 3680
2. Rs 3546
3. Rs 3855
4. Rs 3165

Q:100 Selling price of B is what percent less than selling price of D.

1. 27.9%
2. 42.67%
3. 35.75%
4. 37.5%

Answer Key

| | | | | |
|---------|---------|---------|---------|----------|
| 1. (4) | 2. (2) | 3. (2) | 4. (4) | 5. (1) |
| 6. (1) | 7. (1) | 8. (2) | 9. (1) | 10. (2) |
| 11. (4) | 12. (4) | 13. (3) | 14. (2) | 15. (1) |
| 16. (3) | 17. (4) | 18. (2) | 19. (4) | 20. (1) |
| 21. (1) | 22. (4) | 23. (4) | 24. (3) | 25. (2) |
| 26. (3) | 27. (1) | 28. (2) | 29. (4) | 30. (4) |
| 31. (3) | 32. (4) | 33. (2) | 34. (3) | 35. (2) |
| 36. (2) | 37. (1) | 38. (4) | 39. (2) | 40. (4) |
| 41. (2) | 42. (2) | 43. (1) | 44. (3) | 45. (4) |
| 46. (2) | 47. (3) | 48. (1) | 49. (2) | 50. (2) |
| 51. (1) | 52. (3) | 53. (4) | 54. (1) | 55. (4) |
| 56. (2) | 57. (1) | 58. (4) | 59. (1) | 60. (2) |
| 61. (4) | 62. (2) | 63. (1) | 64. (2) | 65. (4) |
| 66. (4) | 67. (2) | 68. (1) | 69. (4) | 70. (1) |
| 71. (4) | 72. (4) | 73. (3) | 74. (1) | 75. (2) |
| 76. (2) | 77. (1) | 78. (3) | 79. (4) | 80. (2) |
| 81. (1) | 82. (3) | 83. (4) | 84. (4) | 85. (3) |
| 86. (3) | 87. (2) | 88. (1) | 89. (3) | 90. (4) |
| 91. (3) | 92. (2) | 93. (4) | 94. (4) | 95. (4) |
| 96. (3) | 97. (2) | 98. (4) | 99. (3) | 100. (4) |

Answers and Solutions

Q:1 The correct answer is **Option 4 i.e. Rs. 1200.**

Number of people visiting Mumbai = 15% of 5000 = $(15/100) \times 5000 = 750$

The total price of the pair of clothes = Rs. 9,00,000

The price of each pair of clothes = Total cost/Number of people visited = 9,00,000/750 = Rs. 1200

Q:2 The correct answer is **Option 2 i.e. Rs. 1,00,000.**

Number of people visited Chennai = $(10/100) \times 5000 = 500$

According to the question,

10% of them have done shopping for Rs. 2000 each

So, 10% of 500 = $(10/100) \times 500 = 50$

50 people have done shopping for Rs. 2000 each

Hence, the total expenditure on shopping = $50 \times 2000 = \text{Rs. } 1,00,000$

Q:3 The correct answer is **Option 2 i.e. 2750.**

Total number of people visiting Mumbai = 15% of 5000 = $(15/100) \times 5000 = 750$

Total number of people visiting Kolkata = 30% of 5000 = $(30/100) \times 5000 = 1500$

Total number of people visiting Chennai = 10% of 5000 = $(10/100) \times 5000 = 500$

Total number of peoples visiting these 3 cities = $750 + 1500 + 500 = 2750$

Q:4 The correct answer is **Option 4 i.e. 1550.**

Number of people visiting Delhi = $(20/100) \times 5000 = 1000$

Out of which 30% canceled the plan = 30% of 1000 = $(30/100) \times 1000 = 300$

Number of people visiting Surat = $(25/100) \times 5000 = 1250$

Hence, The total number of people visiting Surat = $1250 + 300 = 1550$

Q:5 The correct answer is **Option 1 i.e. 1000.**

$$\text{The number of people visiting Delhi} = (20/100) \times 5000$$

$$= 1000$$

$$\text{The number of people visiting Kolkata} = (30/100) \times 5000$$

$$= 1500$$

$$\text{The number of people visiting Chennai} = (10/100) \times 5000$$

$$= 500$$

$$\text{Average} = (1000 + 1500 + 500)/3 = 3000/3 = 1000$$

Q:6 The correct answer is **Option 1 i.e. 38.46%**

$$\text{The runs made in deep square area} = 20\% \text{ of } 200 = 40.$$

$$\text{The total runs made in mid off area and extra cover area} = (27\% \text{ of } 200) + (25\% \text{ of } 200) = 54 + 50 = 104.$$

$$\text{Percentage} = (40/104) \times 100 = 38.46\%$$

Q:7 The correct answer is **Option 1 i.e. 36 and 20.**

$$\text{The runs made in mid-off area} = 27\% \text{ of } 200 = 54.$$

$$\text{The runs made in deep square area} = 20\% \text{ of } 200 = 40.$$

$$\text{Runs made in fine leg area} = 10\% \text{ of } 200 = 20.$$

$$\text{Runs made in extra cover area} = 25\% \text{ of } 250 = 50.$$

$$\text{The runs made in leg gully area} = 18\% \text{ of } 200 = 36.$$

$$\text{The average runs made by Virat} = 40.$$

From the solution, we can see that the sum of runs made in the final leg area and leg gully area are closest to the average runs

I.e. $36 + 20 = 56$ is the closest run to the average run.

Q:8 The correct answer is **Option 2 i.e. 55.56%**

$$\text{The total runs scored in mid-off area and leg gully area} = 54 + 36 = 90 \text{ runs.}$$

$$\text{The average runs scored by Virat} = 200/5 = 40 \text{ runs.}$$

$$\text{Difference} = 90 - 40 = 50 \text{ runs.}$$

$$\text{Percentage} = (50/90) \times 100 = 55.56\%$$

Q:9 The correct answer is **Option 1 i.e. 25.92 more**

$$\text{The total runs scored by Virat in the middle of area} = 27\% \text{ of } 200 = (27/100) \times 200 = 54$$

$$\text{The average runs scored by Virat} = 200/5 = 40$$

$$\text{Difference} = 54 - 40 = 14$$

$$\text{Percentage} = (14/54) \times 100 = 25.92\% \text{ more.}$$

Q:10 The correct answer is **Option 2 i.e. 36.**

$$\text{The percentage of runs scored in leg gully area} = 100 - (27 + 20 + 10 + 25) = 100 - 82 = 18\%.$$

So, the runs scored in Leg gully area = $18\% \text{ of } 200 = 36$ runs

Q:11 The correct answer is **Option 4 i.e. 85.71%.**

$$\text{Total revenue} = \text{RS.} 985,000$$

$$\text{Revenue on Clothes} = 985,000/100 \times 15$$

$$= 147,750$$

$$\text{Revenue on Indoor games}$$

$$= 985,000/100 \times 15 = 147,750$$

$$\text{Revenue on food} = 985,000/100 \times 35 = 344,750$$

$$\text{percentage} = 100/344,750 \times 295,500 = 85.71$$

Q:12 The correct answer is **Option 4 i.e. 164,166.66.**

$$\text{Total revenue} = \text{Rs.} 985,000$$

$$\text{Revenue on Movies} = 985,000/100 \times 20 = 197,000$$

$$\text{Revenue on Electronic goods} = 985,000/100 \times 15 = 147,750$$

$$\text{Revenue on Clothes} = 985,000/100 \times 15 = 147,750$$

$$\text{Total revenue on these} = 197,000 + 147,750 + 147,750 = 492,500$$

$$\text{Average} = 492,500/3 = 164,166.66$$

Q:13 The correct answer is **Option 3 i.e. RS.91289.8.**

$$\text{Total Revenue} = \text{Rs.} 985,000$$

$$\text{Revenue on food} = 985,000/100 \times 35$$

$$344,750$$

$$\text{The cost price of food} = 344,750/125 \times 100 = 275,800$$

CI =

| P | = | 1st yr | 2nd yr | 3rd yr |
|---------|-----|--------|--------|--------|
| 275,800 | | 27580 | 27580 | 27580 |
| 10% | | 2758 | 2758 | 2758 |
| | 10% | | | |
| | | | 2758 | |
| | | | | 10% |
| | | | | 275.8 |

$$= \text{Rs.} 91289.8$$

Q:14 The correct answer is **Option 2 i.e. 49,250.**

$$\text{Total revenue} = \text{RS.} 985,000$$

$$\text{Revenue on the Movie} = 985,000/100 \times 20 = 1,97,000$$

$$\text{Revenue on the Indoor game}$$

$$985,000/100 \times 15 = 147,750$$

$$\text{Difference} = 197,000 - 147,750 = 49,250$$

Q:15 The correct answer is **Option 1 i.e. 123,125/128,478.**

$$\text{Total revenue} = \text{RS.} 985,000$$

$$\text{Revenue on Electronics goods} = 985,000/100 \times 15 = 147,750$$

$$\text{Revenue on Clothes} = 985,000/100 \times 15 = 147,750$$

Since 20% gained on the electronics goods

$$\text{So Cost price} = 147,750/120 \times 100 = \text{Rs.} 123,125$$

Since 15% gained on the clothes

$$\text{So Cost price} = 147,750/115 \times 100 = \text{Rs.} 128,478$$

$$\text{Ratio} = 123,125/128,478$$

Q:16 The correct answer is **Option 3 i.e. 122.4°.**

Form the pie chart:

34% of the total people lack calcium

Hence,

Angle corresponding to the percentage of people who lack calcium

$$\Rightarrow 34 \times 360/100 = 122.4^\circ$$

Q:17 The correct answer is **Option 4 i.e. 133.**

Form the pie chart:

18% of the total people lack vitamin D

Out of the people who lack vitamin D, 36% lack vitamin A also

So,

$$\text{Number of people who lack both vitamin D and A} = 1250 \times 0.18 \times 0.36 = 81$$

Given: there are a total of 214 people who lack vitamin A
So,
Number of people who lack vitamin A only = $(214 - 81) = 133$

Q:18 The correct answer is **Option 2 i.e. 200.**

Form the pie chart:

34% of the total people lack calcium

9/17 of the people who lack calcium took medicine and controlled their level of calcium.

So, $8/17 = (1 - 9/17)$ of the people who have not controlled their level of calcium

So,

$$\text{Required number of people} = 1250 \times 0.34 \times 8/17 = 200$$

Q:19 The correct answer is **Option 4 i.e. 131.**

Form the pie chart:

22% of the total people lack vitamin B and 18% of the total people lack vitamin D

So,

$$\text{Total number of people who lack Vitamin B and D} = 1250 \times (18 + 22)/100 = 500$$

Given: The total number of males and females who lack Vitamin B and D is 3 : 2

So,

$$\text{Total number of males who lack Vitamin B and D} = 500 \times 3/5 = 300$$

Given: 169 males lack vitamin B

Hence,

$$\text{Number of males who lack Vitamin D} = (300 - 169) = 131$$

Q:20 The correct answer is **Option 1 i.e. 182.**

Form the pie chart:

26% of the total people lack vitamin C

44% are male which means $56\% = (100 - 44)$ are females

So,

The number of females who visited the hospital due to a lack of Vitamin C

$$\Rightarrow 1250 \times 0.26 \times 0.56$$

$$\Rightarrow 325 \times 0.56 = 182$$

Q:21 The correct answer is **option 1 i.e. Rs. 17,800.**

The Cost price of each Air conditioner = Rs. 20,000

Number of Air conditioners sold = 25

The total Cost Price of 25 A.Cs = $20,000 \times 25 = \text{Rs. } 5,00,000$

But Since there was a loss of Rs. 55,000.

The selling price of all A.Cs = 4,45,000

Hence, selling price of each A.C = $4,45,000/25 = 17,800$

Hence, the Selling Price of each A.C is 17,800.

Q:22 The correct answer is **option 4 i.e. 23%**

Sales in 2024 are 5000

Sales in 2025 = 6150

$$\text{Difference} = 6150 - 5000 = 1150$$

$$\text{Percentage increase in sales} = (1150/5000) \times 100 = 23\%$$

Hence, the percentage increase in sales of ACs is 23%.

Q:23 The correct answer is **option 4 i.e. 12 : 13**
Sale of Hitachi = $(30/100) \times 5000 = 1500$
Sale of LG = $(20/100) \times 5000 = 1000$
Sale of Daikin = $(13/100) \times 5000 = 650$
Sale of Blue star = $(15/100) \times 5000 = 750$
Sale of Voltas = $(22/100) \times 5000 = 1100$
Ratio = $(750 + 1000 + 650)/(1500 + 1100) = 2400/2600 = 12 : 13$

Q:24 The correct answer is **option 3 i.e. Rs. 86,25,000**
Given the Cost price = Rs. 10,000
Profit% = 15%
Profit = $(\text{Profit}/100) \times \text{Cost price}$
Selling price = Cost price + profit
Total Selling price = Selling price \times the number of Blue star ACs sold in 2021.
Cost price = 10,000
Profit% = 15%
Profit = $(15/100) \times 10,000 = \text{Rs. } 1500$.
Selling price = $10,000 + 1500 = \text{Rs. } 11,500$
Number of Blue star ACs sold = $(15/100) \times 5000 = 750$
Total selling price = $11,500 \times 750 = \text{Rs. } 86,25,000$

Q:25 The correct answer is **option 2 i.e. 1050.**

Given the total sales of the year 2024 = 5000
Sales of Hitachi = $(30/100) \times 5000 = 1500$
Sales of LG = $(20/100) \times 5000 = 1000$
Sales of Daikin = $(13/100) \times 5000 = 650$
Average = $(\text{Total sales of Hitachi} + \text{LG} + \text{Daikin})/3$
Average = $(1500 + 1000 + 650)/3 = 3150/3 = 1050$

Q:26 The correct answer is **option 3 i.e. 2.56 kg**

Total percentage quantity of Vitamin A, C and E = 20 + 25 + 12 = 57%
And
Total quantity of Vitamin B and D = 15 + 10 = 25%
Hence, required difference = $57 - 25 = 32\%$ of 8 kg = 2.56 kg

Q:27 The correct answer is **option 1 i.e. 214 gm**

Quantity of Vitamin C in 3 kg of powder = $3000 \times 0.25 = 750$ gm
Suppose 'a' gram of Vitamin C is added.
So,
 $750 + x = 0.3 \times (3000 + x)$
 $750 + x = 900 + 0.3x$
 $0.7x = 150$
 $x = 214.28$ or 214 gm (Approx.)

Q:28 The correct answer is **option 2 i.e. 400 gm**

Quantity of Vitamin E in 5 kg of powder = $5000 \times 0.12 = 600$ gm
Suppose 'x' gm of Vitamin K is added.
So,
 $600/(5000 + x) = 100/900$
 $5400 = 5000 + x$
 $x = 400$
Hence, 400 gm of Vitamin K is added.

Q:29 The correct answer is **option 4 i.e. 128%**

Since, we need to draw the percentage, there is no need to calculate the actual values of these quantities.

Percentage of protein in the mixture = $(180/1500) \times 100$
= 12%

So,

Total quantity of Vitamin A and Protein = $20 + 12 = 32\%$

And

Total quantity of Vitamin B and D = $15 + 10 = 25\%$

Hence,

Required percentage = $[32/25] \times 100 = 128\%$

Q:30 The correct answer is **option 4 i.e. 120 grams**

Given: There is 180 gm protein in 1.5 kg box of that weight gaining powder.

So,

Percentage of protein = $180/1500 = 12\%$

Hence, percentage of carbohydrate = $18 - 12 = 6\%$

Now,

Quantity of carbohydrate in the 2 kg box = $0.06 \times 2000 = 120$ grams

Q:31 The correct answer is **Option 3 i.e. 100.**

Speed of A = 20% of 450 = 90 km/hr

Speed of B = 24% of 450 = 108 km/hr

Total distance = 900 km

Distance travelled by B = $(3/5) \times 900 = 540$ km

Time taken by B = $(540/108) = 5$ hours

Distance travelled by A = $900 - 540 = 360$ km

Time taken by A = $(360/90) = 4$ hours

Average speed = Total distance/Total time = $900/(4 + 5) = 100$ km/hr

Q:32 The correct answer is **Option 4 i.e. 58.5.**

Let speeds of A, B, C, D and E be $20x, 24x, 14x, 26x$ and $16x$ respectively.

Let time be $6y, 9y, 12y, 4y$ and $10y$.

Total distance = $20x \times 6y + 24x \times 9y + 14x \times 12y + 26x \times 4y + 16x \times 10y = 768xy$

$768xy = 1728$

$xy = 2.25$

Distance when time is interchanged = $20x \times 10y + 24x \times 4y + 14x \times 12y + 26x \times 9y + 16x \times 6y = 794xy$

Difference in distance = $794xy - 768xy = 26xy = 58.5$ km

Q:33 The correct answer is **Option 2 i.e. 28 : 47.**

Let speeds of A, B, C, D and E be $20x, 24x, 14x, 26x$ and $16x$ respectively.

Let time be $6y, 9y, 12y, 4y$ and $10y$.

Since it's a question based on ratios, we don't need real values.

Total distance by A and D = $20x \times 6y + 26x \times 4y = 224xy$

Total distance by B and E = $24x \times 9y + 16x \times 10y = 376xy$

Required ratio = $224xy/376xy = 28 : 47$

Q:34 The correct answer is **Option 3 i.e. 441.**

Total time to meet after C starts = 7.30 a.m to 2.30 pm
= 7 hours

Speed of C = 14% of 450 = 63 km/hr

Distance between XZ will be = $63 \times 7 = 441$ km

Q:35 The correct answer is **Option 2 i.e. 366.**

Let speeds of A, B, C, D and E be $20x, 24x, 14x, 26x$ and $16x$ respectively.

Let time be $6y, 9y, 12y, 4y$ and $10y$.

Total distance = $20x \times 6y + 24x \times 9y + 14x \times 12y + 26x \times 4y + 16x \times 10y = 768xy$

$768xy = 1728$

$xy = 2.25$

Total distance by B, C and D = $24x \times 9y + 14x \times 12y + 26x \times 4y = 488xy$

Average distance = $(488 \times 2.25)/3 = 366$ km

Q:36 The correct answer is **option 2 i.e. 75%.**

Passed student in Hindi = $12/100 \times 12,000 = 1440$

Failed student in Hindi = $1440 \times 125/100 = 1800$

Passed student in English = $12,000 \times 20/100 = 2400$

Required percentage = $1800/2400 \times 100 = 75\%$

Q:37 The correct answer is **option 1 i.e. 11 : 6.**

Total passed student in Physics = $15/100 \times 12,000 = 1800$

Passed student in Chemistry = $10/100 \times 12,000 = 1200$

Required Ratio = $(4000 - 1800)/1200 = 2200/1200 = 11 : 6$

Q:38 The correct answer is **option 4 i.e. 29,400.**

25% of total student = 12,000

Total student = 48,000

Total failed student = $48,000 - 12,000 = 36,000$

Total passed student in Computer, Math, and Hindi together

$\Rightarrow 55/100 \times 12,000 = 6,600$

Required difference = $36,000 - 6,600 = 29,400$

Q:39 The correct answer is **option 2 i.e. $59\frac{1}{11}\%$.**

Required percentage = $\frac{(20+15)-(10+12)}{10+12} \times 100$

$\Rightarrow \frac{35-22}{22} \times 100 = 59\frac{1}{11}\%$

Q:40 The correct answer is **option 4 i.e. 2700.**

Total failed student = $12000/2 \times 3 = 18000$

Required average = $1/2 [(10 + 20)/100] \times 18000 = 2700$

Q:41 The correct answer is **option 2 i.e. Rs 15444.**

Let the total number of salons in all the given areas together be 'x'.

So, $(0.12 + 0.26) \times x = 228$

$x = 228/0.38$

$x = 600$

| Areas | Number of salons |
|-------|------------------|
| A | 12% of 600 = 72 |
| B | 24% of 600 = 144 |
| C | 20% of 600 = 120 |
| D | 18% of 600 = 108 |
| E | 26% of 600 = 156 |

Required total revenue generated by all the salons of area E together = $15 \times 156 \times 5 + 12 \times 156 \times 2 = \text{Rs } 15444$

Q:42 The correct answer is **option 2 i.e. 288.**

Required total number of barbers in all the salons together of area A = $72 \times 4 = 288$

Q:43 The correct answer is **option 1 i.e. 46%.**

Required percentage = $(72/156) \times 100 = 46.15\% \sim 46\%$

Q:44 The correct answer is **option 3 i.e. 48.**

Required number of Unisex salons = $(4/9) \times 108 = 48$

Q:45 The correct answer is **option 4 i.e. 24.**

Required difference = $144 - 120 = 24$

Q:46 The correct answer is **Option 2 i.e. 76.8°.**

Initially, let T acres be the total area under cultivation. Then, the area under wheat production initially was = $(72/360)t$ acres = $(t/5)$ acres

Now, if the total area under cultivation is increased by 5%, then the new value of the total area = $(105t/100)$ acres

Also, if the area under wheat production is increased by 12%, then the new value of the area under wheat = $[(t/5) + (12\% \text{ of } t/5)] = (112t/500)$ acres

Hence, the correct angle corresponding to wheat in the new pie chart:

$$\Rightarrow \{[(\text{new area under wheat})/(\text{total new area})] \times 360\}^\circ = (112t/500)/(105t/100) \times 360^\circ = 76.8^\circ$$

Q:47 The correct answer is **Option 3 i.e. Rice, Wheat and Barley.**

The total of the central angle corresponding to the three crops which cover 50% of the total area, should be 180° . Now, the total of the central angles for the given combinations are:

1. wheat, barley, jowar = $(72^\circ + 36^\circ + 18^\circ) = 126^\circ$

2. rice, wheat, jowar = $(72^\circ + 72^\circ + 18^\circ) = 162^\circ$

3. rice, wheat, barley = $(72^\circ + 72^\circ + 36^\circ) = 180^\circ$

So, Required combination = rice, wheat, barley

Q:48 The correct answer is **Option 1 i.e. 6.**

The area under any of the food crops is proportional to the central angle corresponding to that crop.

Let, the area under rice production be x million acres

Then,

$$18 : 72 = 1.5 : x$$

$$\Rightarrow x = 6$$

Q:49 The correct answer is **Option 2 i.e. 3 : 1.**

Let the total production of barley be T tonnes and Z acres of land be put under barley production.

Then, the total production of wheat = $6T$ tonnes

As, (area under wheat production/area under barley production) = $72^\circ/36^\circ = 2$

and therefore, area under wheat = $2 \times$ area under barley = $2Z$ acres

Now, yield per acre for wheat = $(6T/2Z)$ tonnes/acre = $(3T/Z)$ tonnes/acre

and yield per acre for barley = (T/Z) tonnes/acre

So, required ratio = 3 : 1

Q:50 The correct answer is **Option 2 i.e. $(100/3)\%$.**

Let Z acres of land be put under barley production
Then, (area under rice production/area under barley production)

$$\Rightarrow (72^\circ/36^\circ) = 2$$

So, area under rice production = $2 \times$ area under barley production = $2Z$ acres

Now, if P tonnes is the yield per acre of barley then, the yield per acre of rice

$$\Rightarrow (p + 50\% \text{ of } p) \text{ tonnes} = (3/2)p \text{ tonnes}$$

Total production of rice = (yield per acre) \times (area under production)

$$\Rightarrow (3p/2) \times 2Z = 3pZ \text{ tonnes}$$

and, total production of barley = pZ tonnes

Percentage production of barley to that of rice = $(pZ/3pZ) \times 100 = (100/3)\%$

Q:51 The correct answer is **option 1 i.e. 2600**

Bill of house 1 = 30% of 4000 i.e. $(30/100) \times 4000 = 1200$

Bill of house 3 = 35% of 4000 i.e. $(35/100) \times 4000 = 1400$

Total bill of house 1 and house 3 = $1200 + 1400 = \text{Rs. } 2600$

Q:52 The correct answer is **option 3 i.e. 1620**

Bill of House 2 increased by 10%

Hence

Amount of the bill of House 2 = $110/100 \times 600 = 660$

Bill of House 4 is increased by 20%, Hence new bill is

Amount of bill of House 4 = $(120/100) \times 800 = 960$

So, the total bill amount of House 2 and House 4 = $660 + 960 = \text{Rs. } 1620$

Q:53 The correct answer is **option 4 i.e. 2 : 1**

Bill amount of House 1 = $(30/100) \times 4000 = 1200$

Bill amount of House 2 = $(15/100) \times 4000 = 600$

Ratio = $1200/600 = 2 : 1$

Q:54 The correct answer is **option 1 i.e. 625 units**

According to question Rs. 800 is charged for 200 units.

So, the per-unit charge = $800/200 = \text{Rs. } 4$

The total bill costs Rs. 2500

So the number of units = $2500/4 = 625$ units.

Q:55 The correct answer is **option 4 i.e. 78%**

Bill amount of House 1 = $(30/100) \times 4000 = 1200$

Bill amount of House 2 = $(15/100) \times 4000 = 600$

Bill amount of House 3 = $(35/100) \times 4000 = 1400$

Total bill amount of House 1 and House 2 = $1200 + 600 = 1800$

Percentage = $(\text{House 3})/(\text{House 1} + \text{House 2}) \times 100$

$$\Rightarrow (1400/1800) \times 100 = 77.77\%$$

i.e. 78% approx.

Q:56 The correct answer is **Option 2 i.e. 33.33%.**

Percentage of the vitamins in the powder = 25%

Total percentage of all other nutrients = $30 + 35 + 10 = 75\%$

Percentage of vitamins with all other nutrients

$$\Rightarrow (25/75) \times 100\% = (1/3) \times 100\% = 33.33\%$$

Q:57 The correct answer is **Option 1 i.e. 30 days.**

Total protein to be taken = 210 gms

Amount of proteins that 1 kg of powder contains = 35%
of 1kg = 350 gms

According to the question

Person intakes, the proteins with a scoop of 10 gm
weigh

If 1000 gms of powder contains 350 gms of protein

Then, 10 gm of powder will contain $(350/1000) \times 10 = 3.5$ gms.

The person intakes 2 scoops per day.

So, according to that, he intakes 3.5×2 gms of proteins
per day = 7 gms of protein/day

So, the number of days he has to take 7 gms of proteins
to complete 210 gms of proteins = $210/7 = 30$ days

Hence, he has to take the powder for 30 days to
complete 210 gms of proteins.

Q:58 The correct answer is **Option 4 i.e. Rs. 350.**

The cost of 1 kg of powder = Rs. 250

The cost for 5 kg = $250 \times 5 = \text{Rs. } 1250$

According to the question,

Person pays only 80% of the total amount

So, amount the person pays for 5 kg powder =
 $(80/100) \times 1250 = \text{Rs. } 1000$

Effective amount the customer pays for proteins in 5 kg
powder = 35% of 1000 = Rs. 350

Q:59 The correct answer is **Option 1 i.e. 13 : 7.**

The ratio of Proteins and Fats with respect to
Carbohydrates and Vitamins = $(\text{Proteins} + \text{Fats})/(\text{Carbohydrates} + \text{Vitamins})$

$$\Rightarrow (35 + 30)/(25 + 10) = 65/35 = 13 : 7$$

Q:60 The correct answer is **Option 2 i.e. 650 gms.**

Amount of carbohydrates in 1 kg = 100 gms

So, in 3 kgs the amount will be $100 \times 3 = 300$ gms

Amount of Vitamins in 1 kg = 250 gms

So, in 3 kgs the amount will be $250 \times 3 = 750$ gms

Amount of Fats in 1 kg = 300 gms

So, in 3 kgs amount will be $300 \times 3 = 900$ gms

Average intake of the 3 nutrients = $(300 + 750 + 900)/3$

$$\Rightarrow 1950/3 = 650 \text{ gms}$$

Q:61 The correct answer is **option 4 i.e. Rs. 48406.**

Cost of decorating each shape = Cost of decorating per
 $\text{cm}^2 \times \text{Area decorated with that figure}$

Cost of decorating circular part = $28 \times 15.8\% = 442.4$

Cost of decorating triangular part = $42 \times 3.75\% = 157.5$

Cost of decorating rectangular part = $37 \times 49.2\% = 1820.4$

Total cost of decorating = $(442.4 + 157.5 + 1820.4)/100 \times 2000\text{cm}^2 = \text{Rs. } 48406$

Q:62 The correct answer is **Option 2 i.e. 13 : 7.**

Required ratio = Sum of the percentage of the area of
Circle and Rectangle : Sum of the percentage of the
area of Triangle and Square

Required Ratio:

$$\Rightarrow (49.2 + 15.8)\% : (3.75 + 31.25)\%$$

$$\Rightarrow 65 : 35 = 13 : 7$$

Q:63 The correct answer is **Option 1 i.e. 172.2 cm.**

Area of square = 31.25% of 2000

$$(\text{side})^2 = 625$$

Side of square = 25 cm

$$\Rightarrow 57.12\% = 4 \times 14.28\% = 4/7$$

Height of triangle = $25 \text{ cm} \times (2/5) = 10 \text{ cm}$

One side of rectangle = $4/7 \times 10 = 40/7 \text{ cm}$

Area of rectangle = 49.2% of 2000 = $984 \text{ cm}^2 = \text{Base} \times \text{Height}$

One side of the rectangle = $40/7 \text{ cm}$

Area = $40/7 \times \text{second side} = 984 \text{ cm}^2$

Second side = 172.2 cm

Q:64 The correct answer is **Option 2 i.e. 3 : 5.**

Area of square = 31.25% of 2000

$$\Rightarrow (\text{side})^2 = 625 \text{ cm}^2$$

Side of square = 25 cm

Area of triangle = 3.75% of 2000 = 75

$$\Rightarrow (1/2) \times \text{Height} \times \text{Base} = 75 \text{ cm}^2$$

Height of triangle = $25 \text{ cm} \times (2/5) = 10 \text{ cm}$

Area of triangle = $(1/2) \times 10 \text{ cm} \times \text{Base} = 75 \text{ cm}^2$

$$\Rightarrow \text{Base} = 15 \text{ cm}$$

Required ratio:

Base of triangle : Side of Square = $15 \text{ cm} : 25 \text{ cm} = 3 : 5$

Q:65 The correct answer is **Option 4 i.e. 641.67 cm².**

Percentage area of circle = 15.8%

Percentage area of square = 31.25%

Percentage area of rectangle = 49.2%

Average area = $(15.8\% + 31.25\% + 49.2\%)/3 \times 2000 = 641.67 \text{ cm}^2$

Q:66 The correct answer is **option 4 i.e. 2700.**

Total number of persons traveling from Kolkata to all
four cities

$$\Rightarrow 360^\circ = 16200$$

$$\Rightarrow 1^\circ = 45$$

Difference between the number of persons traveling to
Delhi and Chennai

$$\Rightarrow 105^\circ - 45^\circ = 60^\circ$$

$$\Rightarrow 60 \times 45 = 2700$$

Q:67 The correct answer is **option 2 i.e. 5440.**

Difference between persons traveling to Chennai and
Lucknow

$$\Rightarrow 105^\circ - 90^\circ = 960$$

$$\Rightarrow 15^\circ = 960$$

$$\Rightarrow 1^\circ = 64$$

Average of the persons traveling from Kolkata to
Mumbai, Delhi, and Lucknow

$$\Rightarrow (120^\circ + 45^\circ + 90^\circ)/3$$

$$\Rightarrow 255/3 = 85^\circ$$

$$\Rightarrow 85 \times 64 = 5440$$

Q:68 The correct answer is **option 1** i.e. **900**.

Total persons traveling from Kolkata to Delhi and Lucknow

$$\Rightarrow 45^\circ + 90^\circ = 8100$$

$$\Rightarrow 135^\circ = 8100$$

$$\Rightarrow 1^\circ = 60$$

Difference between total persons from Kolkata traveling to Mumbai and Chennai

$$\Rightarrow 120^\circ - 105^\circ = 15^\circ$$

$$\Rightarrow 15 \times 60 = 900$$

Q:69 The correct answer is **option 4** i.e. **5 : 7**.

Total persons traveling from Kolkata to Delhi and Chennai together

$$\Rightarrow (45^\circ + 105^\circ) = 150^\circ$$

Total persons traveling from Kolkata to Mumbai and Lucknow together

$$\Rightarrow (120^\circ + 90^\circ) = 210^\circ$$

$$\text{Required ratio} = 150^\circ : 210^\circ = 5 : 7$$

Q:70 The correct answer is **option 1** i.e. **28800**.

Difference between persons traveling from Kolkata to Mumbai and Chennai

$$\Rightarrow 120^\circ - 105^\circ = 1200$$

$$\Rightarrow 15^\circ = 1200$$

$$\Rightarrow 1^\circ = 80$$

Total persons traveling from Kolkata to all four cities together = 360°

$$\Rightarrow 360 \times 80 = 28800$$

Q:71 The correct answer is **option 4** i.e. **66 cm**.

Area of larger square = $30 \times 30 = 900 \text{ cm}^2$

From the Pie chart:

Area of the circle = $900 \times 0.385 = 346.5 \text{ cm}^2$

So,

$$22/7 \times r^2 = 346.5$$

$$\Rightarrow r^2 = 110.25$$

$$\Rightarrow r = 10.5$$

Hence,

Circumference of the circle = $2 \times 22/7 \times 10.5 = 66 \text{ cm}$

Q:72 The correct answer is **option 4** i.e. **60 cm**.

Area of larger square = $30 \times 30 = 900 \text{ cm}^2$

From the Pie chart:

Area of the rectangle = $900 \times 0.21 = 189 \text{ cm}^2$

Suppose the length and breadth of the rectangle are 'x' and '(x - 12)' respectively.

So,

$$x \times (x - 12) = 189$$

$$\Rightarrow x^2 - 12x - 189 = 0$$

$$\Rightarrow (x - 21)(x + 9) = 0$$

$$\text{So, } x = 21$$

Length = 21 cm and breadth = 9 cm

Now,

Perimeter of the rectangle = $2 \times (21 + 9) = 60 \text{ cm}$

Q:73 The correct answer is **option 3** i.e. **$9\sqrt{2} \text{ cm}$** .

Area of larger square = $30 \times 30 = 900 \text{ cm}^2$

From the Pie chart:

Area of the triangle = $900 \times 0.045 = 40.5 \text{ cm}^2$

Given: the triangle drawn is a right-angle triangle with a base equal to perpendicular.

Suppose base = perpendicular = a cm

Hence,

$$1/2 \times \text{Base} \times \text{Perpendicular} = 40.5$$

$$\Rightarrow 1/2 \times a \times a = 40.5$$

$$\Rightarrow a^2 = 81$$

$$\Rightarrow a = 9$$

Hence,

$$\text{Hypotenuse of the triangle} = \sqrt{(a^2 + a^2)} = a\sqrt{2} = 9\sqrt{2} \text{ cm}$$

Q:74 The correct answer is **option 1** i.e. **171 cm^2**

Area of larger square = $30 \times 30 = 900 \text{ cm}^2$

From the Pie chart:

Area of the smaller square = $900 \times 0.09 = 81 \text{ cm}^2$

So,

$$\text{Side of smaller square} = \sqrt{81} = 9 \text{ cm}$$

The side of larger square is 30 cm and that of the smaller square is 9 cm;

So, 3 small squares ($9 \times 3 = 27 \text{ cm}$) will fit into a vertical line and 3 into a horizontal line.

Hence, total small squares = $3 + 3 + 3 = 9$

Now,

$$\text{Remaining area} = 900 - 9 \times 81 = 171 \text{ cm}^2$$

Q:75 The correct answer is **Option 2** i.e. **44.44%**.

Area of larger square = $30 \times 30 = 900 \text{ cm}^2$

From the Pie chart:

Total remaining area = $900 \times 0.27 = 243 \text{ cm}^2$

Area of new rectangle = $12 \times 9 = 108 \text{ cm}^2$

So,

$$\text{Required percentage} = [108/243] \times 100 = 44.44\%$$

Q:76 The correct answer is **option 2** i.e. **Rs. 1200**.

From the pie chart:

Percentages of the total amount won by A and B are 15% and 21% respectively.

So, the Total amount with A and B

$$= 12500 \times (0.15 + 0.21)$$

$$= 12500 \times 0.36 = \text{Rs. 4500}$$

They spent 1/3 of the amount on food.

So, The remaining amount after spending on food

$$= 4500 \times 2/3$$

$$= \text{Rs. 3000}$$

They spent 60% of the remaining amount on entertainment.

So, the Remaining amount with them

$$= 3000 \times 0.4 = \text{Rs. 1200}$$

Q:77 The correct answer is **option 1** i.e. **Rs. 860**.

From the pie chart:

The percentage of total amount won by D is 14%

So, Amount of money won by D = 12500×0.14

$$= \text{Rs. 1750}$$

$$\text{So, P} = 1750 + 2550 = \text{Rs. 4300}$$

$$\text{R} = 10\%, \text{T} = 2$$

$$\text{So, SI} = (P \times R \times T)/100$$

$$= (4300 \times 10 \times 2)/100 = \text{Rs. 860}$$

Q:78 The correct answer is **option 3 i.e. 3 : 1.**

From the pie chart:

Percentages of the total amount won by A and C are 15% and 9% respectively.

So, The difference in amounts won by A and C = $15\% - 9\% = 6\%$

From the pie chart:

Percentages of the total amount won by D and F are 14% and 16% respectively.

So, The difference in amounts won by D and F = $16\% - 14\% = 2\%$

Hence, Required ratio = $(12500 \times 6\%) : (12500 \times 2\%) = 3 : 1$

Q:79 The correct answer is **option 4 i.e. Rs. 1675.**

From the pie chart:

The percentage of the total amount won by B is 21% and B spent 60% of the amount so 40% is remaining.

So, the Remaining amount with B

$$= 12500 \times 0.21 \times 0.4$$

$$= \text{Rs. } 1050$$

From the pie chart:

The percentage of the total amount won by E is 25%

And

E spent 80% of the amount so 20% is remaining.

So, the Remaining amount with E

$$= 12500 \times 0.25 \times 0.2 = \text{Rs. } 625$$

Hence,

$$\text{Required sum} = 1050 + 625 = \text{Rs. } 1675$$

Q:80 The correct answer is **option 2 i.e. Rs. 50**

From the pie chart:

Percentages of total amount won by C is 9%

And it is divided into 3 parts in the ratios 4 : 5 : 6.

So, Largest part from amount won by C

$$= 12500 \times 0.09 \times 6/15$$

$$= \text{Rs. } 450$$

From the pie chart:

Percentages of total amount won by F is 16%

And it is divided into 3 parts in the ratios 2 : 5 : 3.

So, Lowest part from amount won by F

$$= 12500 \times 0.16 \times 2/10$$

$$= \text{Rs. } 400$$

Hence, Required difference

$$= 450 - 400 = \text{Rs. } 50$$

Q:81 The correct answer is **option 1 i.e. 225 ml.**

4/9 of the Green colour = $0.18 \times 1500 \times 4/9 = 120 \text{ ml}$

And,

35% of the Red colour = $0.35 \times 0.2 \times 1500 = 105 \text{ ml}$

Hence, Required quantity of Brown colour = $(120 + 105) = 225 \text{ ml}$

Q:82 The correct answer is **option 3 i.e. Rs. 97.5.**

The per liter cost of Red and Blue color paint is Rs. 250 and Rs. 300

So,

Total cost incurred = $0.2 \times 1.5 \times 250 + 0.05 \times 1.5 \times 300$

$$\Rightarrow 75 + 22.5 = \text{Rs. } 97.5$$

Q:83 The correct answer is **option 4 i.e. 480 ml.**

From the Pie chart:

The difference in the quantity of Black and Red colors of paint used

$$\Rightarrow [25 - 20] = 5\%$$

The difference in the quantity of White and Blue colors of paint used

$$\Rightarrow [32 - 5] = 27\%$$

$$\text{Hence, required sum} = [5 + 27]/100 \times 1500 = 480 \text{ ml}$$

Q:84 The correct answer is **option 4 i.e. 468.75 ml.**

From the Pie chart:

Percentage quantity of Black colour paint used = 25%

And,

The total quantity of paint used = 1500 ml

Hence,

Quantity of Black colour used for painting = $0.25 \times 1500 = 375 \text{ ml}$

Hence,

Quantity of Black colour brought for painting = $375/0.8 = 468.75 \text{ ml}$

Q:85 The correct answer is **option 3 i.e. 50%.**

From the Pie chart:

Total percentage quantity of White and Black color paint used

$$\Rightarrow [32 + 25] = 57\%$$

Total percentage quantity of Red and Green color paint used

$$\Rightarrow [20 + 18] = 38\%$$

Hence, required percentage = $[(57 - 38)/38] \times 100 = 50\%$

Q:86 The correct answer is **option 3 i.e. 21.4%.**

From the Pie chart:

Total number of Covid cases in USA and Russia = 35 + 9 = 44% of total cases

And

Total number of Covid cases in other 3 countries = 100 - 44 = 56% of total cases

Hence,

Required percentage = $[(56 - 44)/56] \times 100 = 21.4\%$

Q:87 The correct answer is **option 2 i.e. 7 lakhs.**

From the Pie chart:

Number of Covid cases in Brazil = 20% of 2.1 crores = 42 lakhs

And

Number of Covid cases in India = 30% of 2.1 crores = 63 lakhs

Since the increase in number of Covid cases in Brazil is 3 lakhs in next 10 days;

Increased number of Covid cases in Brazil = $42 + 3 = 45 \text{ lakhs}$

And the ratio of number of Covid cases in India and Brazil becomes 14 : 9 in next 10 days

So, Increased number of Covid cases in India = $45 \times 14/9 = 70 \text{ lakhs}$

Hence,

Increase in number of Covid cases in India = $70 - 63 = 7 \text{ lakhs}$

Q:88 The correct answer is **option 1** i.e. **26.25 lakhs**.
We need not to calculate the number of Covid cases in each country.

From the Pie chart:

Total number of Covid cases in USA and Brazil = $35 + 20 = 55\%$ of total cases

So,

Average number of Covid cases in USA and Brazil = $55/2 = 27.5\%$ of total cases

And

Total number of Covid cases in India, Russia and Spain = $100 - 55 = 45\%$ of total cases

So,

Average number of Covid cases in India, Russia and Spain = $45/3 = 15\%$ of total cases

Hence,

Required difference = $27.5 - 15 = 12.5\%$ of 2.1 cr = 26.25 lakhs

Q:89 The correct answer is **option 3** i.e. **India**.

From the Pie chart:

Number of Covid cases in USA after 1 month = $0.35 \times 2.1 \times 1.1 = 80.85$ lakhs

Number of Covid cases in India after 1 month = $0.3 \times 2.1 \times 1.3 = 81.9$ lakhs

Number of Covid cases in Brazil after 1 month = $0.2 \times 2.1 \times 1.7 = 71.4$ lakhs

Hence,

India has the highest number of cases after 1 month.

Q:90 The correct answer is **option 4** i.e. **8.1 lakhs**.

From the Pie chart:

Number of Covid cases in Brazil = 20% of 2.1 crores = 42 lakhs

The mortality rate is 3.33% and 32.5 lakhs people got recovered from the virus;

So,

Number of deaths in Brazil = $42 \times 3.33/100 = 1.4$ lakhs

So,

Number of active cases in Brazil = $42 - 1.4 - 32.5 = 8.1$ lakhs

Q:91 The correct answer is **Option 3** i.e. **1,56,000 units**.

Given, Oil and Plastic combined amount to 98,000 units of Import.

Now, Oil and plastic together consist of 23% + 26% = 49% of imports.

i.e. 49% of total import = 98,000 units,

Total import = $98000 \times 100/49 = 2,00,000$ unit

Now, plastic amounts to 26% of total import, which is: $26/100 \times 200000 = 52,000$ unit

This is 1/3rd of what the US exports, so

US exports = $52,000 \times 3 = 1,56,000$ unit

Q:92 The correct answer is **Option 2** i.e. **78,200 units**.
Given, Oil and Plastic combined amount to 98,000 units of Import.

Now, Oil and plastic together consist of: 23% + 26% = 49% of imports.

i.e. 49% of total import = 98,000 units,

Total import = $98000 \times 100/49 = 2,00,000$ unit

Now, Oil import corresponds to 23% of total import which is: $23/100 \times 200000 = 46,000$ unit

India exports 70% more than the Oil it imports, which is :

$$\Rightarrow 170/100 \times 46000 = 78,200 \text{ unit}$$

Q:93 The correct answer is **Option 4** i.e. **None of these**.

Given, Oil and Plastic combined amount to 98,000 units of Import.

Now, Oil and plastic together consist of 23% + 26% = 49% of imports.

i.e. 49% of total import = 98,000 units,

Total import = $98000 \times 100/49 = 2,00,000$ unit

Now, Organic chemical consists of 15% of total imports which is: $15/100 \times 200000 = 30,000$ Unit

Given in the question, the Ratio of organic chemicals to precious stone import is 5:2,

Hence,

Precious stone import = $3000 \times 2/5 = 12,000$ unit

So the answer is None of these.

Q:94 The correct answer is **Option 4** i.e. **15%**

Given, Oil and Plastic combined amount to 98,000 units of Import.

Now, Oil and plastic together consist of 23% + 26% = 49% of imports.

i.e. 49% of total import = 98,000 units,

Total import = $98000 \times 100/49 = 2,00,000$ unit

Now, Iron and steel import by India in 2018-19 consists of 20% of total import which is:

$$\Rightarrow 20/100 \times 200000 = 40000 \text{ unit.}$$

In 2020, Iron and steel imports decreased by 25% i.e. $25/100 \times 40000 = 10,000$ unit

So the total unit of Iron and steel imported in 2020 = $40000 - 10000 = 30,000$ units.

Total import unit remains the same, i.e. 2,00,000 unit

Hence, % of Iron and steel in total import = $30000/200000 \times 100 = 15\%$

Q:95 The correct answer is **Option 4** i.e. **Rs. 39,76,000**

Given, Oil and Plastic combined amount to 98,000 units of Import.

Now, Oil and plastic together consist of 23% + 26% = 49% of imports.

i.e. 49% of total import = 98,000 units,

Total import = $98000 \times 100/49 = 2,00,000$ unit

Now, Electronic item consists of 16% of total import which is: $16/100 \times 200000 = 32,000$ unit

And Oil consists of 23% of total import which is: $23/100 \times 200000 = 46,000$ unit

Hence the total cost of import of these two items is:

$$\Rightarrow (32000 \times 15) + (46,000 \times 76) = \text{Rs. } 39,76,000$$

Q:96 The correct answer is **option 3 i.e. 32 : 25.**
Because Question deals with ratio, it is better to take total selling price as Rs 360.
Combined selling price of B and F = $54 + 61.2 = 115.2$
Combined selling price of C and E = $43.2 + 46.8 = 90$
Ratio = $115.2 : 90 = 32 : 25$

Q:97 The correct answer is **option 2 i.e. 33.33%.**
Selling price of F = $(61.2/360) \times 10500 = \text{Rs } 1785$
Let cost price of F be M
Profit = $16.67\% = 1/6$
 $\Rightarrow M + 16.67\% \text{ of } M = 1785$
 $\Rightarrow (116.67/100)M = 1785$
 $\Rightarrow M = \text{Rs } 1530$
Marked price = N
 $\Rightarrow (100 - 12.5)\% \text{ of } N = 1785$
 $\Rightarrow N = \text{Rs } 2040$
Let Mark up percentage be x
 $\Rightarrow (100 + x)\% \text{ of } 1530 = 2040$
 $\Rightarrow (100 + x) = 133.33$
 $\Rightarrow x = 33.33\%$

Q:98 The correct answer is **option 4 i.e. Rs.1548.75.**
Share of A, B, C and E combined = $(68.4 + 54 + 43.2 + 46.8) = 212.4$
Average share = $212.4/4 = 53.1$
Average selling price = $53.1/360 \times 10500 = \text{Rs } 1548.75$

Q:99 The correct answer is **option 3 i.e. Rs. 3855.**
Total Selling price = Rs 10500
Selling price of A = $(68.4/360) \times 10500 = \text{Rs } 1995$
Let Marked price be A.
Discount = $12.5\% = 1/8$
 $\Rightarrow (100 - 12.5)\% \text{ of } A = 1995$
 $\Rightarrow (7/8) \text{ of } A = 1995$
 $\Rightarrow A = \text{Rs } 2280$
Selling price of C = $(43.2/360) \times 10500 = \text{Rs } 1260$
Let the Marked price be C
Discount = 20%
 $\Rightarrow (100 - 20)\% \text{ of } C = 1260$
 $\Rightarrow 80\% \text{ of } C = 1260$
 $\Rightarrow C = \text{Rs } 1575$
Required sum = $2280 + 1575 = \text{Rs } 3855$

Q:100 The correct answer is **option 4 i.e. 37.5%.**
Since, the question deals purely in percentage, we'll consider the total selling price equal to 360.
Selling price of B = 54
Selling price of D = 86.4
Difference = $86.4 - 54 = 32.4$
Required percentage = $(32.4/86.4) \times 100 = 37.5\%$





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TABLES

Direction (Q1 – Q5): The table below shows the percentage discounts offered by Amazon, Flipkart, Myntra, Zomato, and Swiggy on different sales (New Year sale, Republic Day sale, Independence Day sale, and Diwali sale) during the year. Study the data carefully and answer the questions that follow.

| | Amazon | Flipkart | Myntra | Zomato | Swiggy |
|-----------------------|--------|----------|--------|--------|--------|
| New Year Sale | 20% | 25% | 15% | 30% | 20% |
| Republic Day Sale | 10% | 5% | 10% | 20% | 25% |
| Independence Day Sale | 15% | 10% | 20% | 25% | 15% |
| Diwali Sale | 30% | 20% | 25% | 40% | 35% |

Q:1 During the New Year sale, a person orders a product marked at Rs. 5400 from Flipkart, another product marked at Rs. 9750 from Amazon, and a product marked at Rs. 600 from Swiggy. Find the total amount of money paid by him.

1. Rs. 12330 2. Rs. 13380
 3. Rs. 12360 4. Rs. 13320

Q:2 Amit buys a pair of shoes from Myntra and paid Rs. 3774 during the new year sale. How much more discount he would have received if he had bought those shoes during the Independence Day sale?

1. Rs. 244 2. Rs. 266
 3. Rs. 222 4. Rs. 211

Q:3 During the Independence Day sale, a person availed Rs. 175 discount from Zomato and Rs. 144 discount from Swiggy. Find the total value of his orders without discount.

1. Rs. 1740 2. Rs. 1660
 3. Rs. 1620 4. Rs. 1580

Q:4 During the Republic day sale, if a person orders a product from each website whose marked price is Rs. 500 in each website then how much total money would he pay for them?

1. Rs. 1950 2. Rs. 2250
 3. Rs. 2400 4. Rs. 2150

Q:5 During the Diwali sale, a person bought a TV from Flipkart paying Rs. 17600 and a refrigerator from Amazon paying Rs. 19950. Find the amount of total discount received by the person.

1. Rs. 12750 2. Rs. 13250
 3. Rs. 12550 4. Rs. 12950

Directions (Q6 – Q10): The table given below gives information about the marked-up percentage, discount percentage, and cost price of four articles A, B, C, and D. On the basis of the information in the table, answer the question.

| Article | Cost price (in Rs) | Marked up per centage (For marked price) | Discount (in %) |
|---------|--------------------|--|-----------------|
| A | 1850 | 120 | 35 |
| B | 2200 | 80 | 20 |
| C | 3000 | 100 | 31 |
| D | 1640 | 75 | 40 |

Q:6 What is the sum of profit percent of article A and article B?

1. 73% 2. 82%
 3. 87% 4. 81%

Q:7 What is the selling price of article C?

1. Rs 3770 2. Rs 4140
 3. Rs 3980 4. Rs 4040

Q:8 Find the ratio of marked price of article D to marked price of article B.

1. 289 : 396 2. 287 : 396
 3. 289 : 393 4. 287 : 393

Q:9 If on article B, another discount of 10% is given. Find the profit on article B.

1. Rs. 695.4 2. Rs. 710.2
 3. Rs. 687.4 4. Rs. 651.2

Q:10 Find the average cost price of all articles.

1. Rs. 2182.5 2. Rs. 2187.5
 3. Rs. 2177.5 4. None of these

Directions (Q11 - Q15): The following table shows the sale of Cold Drinks in 4 different months of summer.

| Cold Drinks | Months | | | |
|-------------|--------|------|------|--------|
| | May | June | July | August |
| Sprite | 200 | 250 | 230 | 150 |
| Thumbs up | 350 | 200 | 280 | 200 |
| Pepsi | 300 | 400 | 500 | 250 |
| Fanta | 100 | 150 | 200 | 120 |
| Slice | 150 | 250 | 300 | 350 |

Study the table and answer accordingly.

Q:11 Which Cold Drink had the highest demand in the market?

- | | |
|--------------|----------|
| 1. Thumbs Up | 2. Pepsi |
| 3. Sprite | 4. Fanta |

Q:12 If each Sprite is sold at Rs 15 then, find the total price earned after the sale of Sprite in the months of May, July, and August.

- | | |
|-------------|-------------|
| 1. Rs. 5500 | 2. Rs. 6200 |
| 3. Rs. 7800 | 4. Rs. 8700 |

Q:13 What is the average sale in the months of May and July?

- | | |
|---------|---------|
| 1. 1352 | 2. 1571 |
| 3. 1250 | 4. 1305 |

Q:14 Which pair of months recorded the highest and the lowest sale respectively?

1. July and August
2. June and July
3. May and August
4. May and June

Q:15 Total sales of Fanta in all the months is what percent of the total sale of all the cold drinks in the month of May? (approx.)

- | | |
|--------|--------|
| 1. 45% | 2. 52% |
| 3. 35% | 4. 30% |

Directions (Q16 – Q19): The following table gives information about runs scored in each innings by the Indian team in a 5 match ODI series. Read the table carefully and answer the questions.

(All runs scored are either through boundaries or by Running)

| Match No. | Runs Scored | Wickets Fallen | Runs scored by boundary : Runs scored by running |
|-----------|-------------|----------------|--|
| 1 | 279 | 6 | 5 : 4 |
| 2 | 256 | 6 | 9 : 7 |
| 3 | 330 | 4 | 5 : 6 |
| 4 | 196 | 10 | 3 : 11 |
| 5 | 304 | 7 | 7 : 9 |

Q:16 Runs scored by Boundaries in the fifth match are what percent of runs scored by running in the 4th match?

- | | |
|----------|----------|
| 1. 95.6% | 2. 93.5% |
| 3. 91.4% | 4. 86.3% |

Q:17 What is the average of the runs scored in each match of the series by running? (Nearest Integer)

- | | |
|--------|--------|
| 1. 151 | 2. 154 |
| 3. 143 | 4. 148 |

Q:18 In 3rd match, number of 6's was 5 less than number of 4's. What is ratio of runs scored through 4's to runs scored through running?

- | | |
|----------|----------|
| 1. 5 : 7 | 2. 4 : 7 |
| 3. 1 : 3 | 4. 2 : 5 |

Q:19 If India lost 2nd and 4th match of the series, what percentage of runs were made through boundaries in other matches?

- | | |
|----------|----------|
| 1. 47.9% | 2. 46.4% |
| 3. 48.3% | 4. 51.3% |
| 5. 52.5% | |

Q:20 In this 5 match series, find the runs scored per wicket.

- | | |
|-------|-------|
| 1. 42 | 2. 44 |
| 3. 43 | 4. 39 |

Directions (Q21 – Q25): Kids of five societies like either Hockey or Cricket. No kid likes both games. The table contains the percentage of kids playing Hockey out of total kids playing games. It also contains the number of kids playing a particular game. Read the information carefully and answer the questions that follow.

| Society | Percentage of kids playing hockey | Number of kids playing cricket |
|---------|-----------------------------------|--------------------------------|
| A | 48% | 130 |
| B | 64% | 540 |
| C | 70% | 210 |
| D | 38% | 465 |
| E | 45% | 660 |

Q:21 Find the ratio of kids playing cricket in society A and B to kids playing Hockey in D and E?

- | | |
|--------------|--------------|
| 1. 33 : 41 | 2. 67 : 82 |
| 3. 134 : 165 | 4. 117 : 131 |

Q:22 Find the average of Cricket players across five societies.

- | | |
|--------|------------------|
| 1. 400 | 2. 397 |
| 3. 402 | 4. None of these |

Q:23 The number of kids playing Hockey in B is what percent of the number of kids playing cricket in the same society?

- | | |
|------------|------------|
| 1. 166.67% | 2. 155.45% |
| 3. 177.78% | 4. 145.45% |

Q:24 Find the total number of kids playing Hockey from society A and C?

- | | |
|--------|--------|
| 1. 610 | 2. 590 |
| 3. 625 | 4. 578 |

Q:25 Only 70% percent of kids staying in society C play games (rest are too small or sick to go out), find the total number of kids in the society?

- | | |
|--------|---------|
| 1. 600 | 2. 400 |
| 3. 700 | 4. 1000 |

Directions (Q26 – Q30): Study the following table carefully and answer accordingly.

The following table shows the number of people working on different floors in an office in which the ratio of managers and experts is also given and the percentage of people working in the day shift is given as there are two shifts i.e. day and night.

| Floors | Number of people | The ratio of managers and experts | Percentage of people working in day shift |
|--------|------------------|-----------------------------------|---|
| First | 500 | 2 : 3 | 60% |
| Second | 800 | 3 : 5 | 40% |
| Third | 450 | 4 : 5 | 80% |
| Fourth | 600 | 5 : 7 | 50% |

Q:26 What is the percentage of people working on the third floor with respect to people working on the other three floors? (find the approx. value)

- 1. 19% 2. 24%
- 3. 30% 4. 11%

Q:27 What is the ratio of experts on the first and the fourth floor?

- 1. 6 : 7 2. 3 : 8
- 3. 2 : 5 4. 7 : 8

Q:28 What are the total numbers of managers in the company?

- 1. 800 2. 900
- 3. 750 4. 950

Q:29 What is the average number of people working on day shifts on all the floors?

- 1. 300 2. 360
- 3. 320 4. 350

Q:30 What is the total number of people working in the night shift on the second and third floors?

- 1. 450 2. 570
- 3. 345 4. 540

Directions (Q31 – Q35): X, Y, and Z invest in five businesses A, B, C, D, and E respectively. The table gives the ratio of money and time for which the money is invested by X, Y and Z for all five businesses. It also gives the total profit for all businesses. Answer the questions on the basis of the information given in the table.

| Business | Ratio of investment (X : Y : Z) | Ratio of time (X : Y : Z) | Total profit (in Rs) |
|----------|---------------------------------|---------------------------|----------------------|
| A | 13 : 8 : 10 | 1 : 2 : 3 | 4720 |
| B | 7 : 4 : 9 | 2 : 4 : 5 | 3000 |
| C | 2 : 3 : 5 | 6 : 8 : 9 | 2430 |
| D | 10 : 5 : 18 | 11 : 7 : 9 | 7675 |
| E | 4 : 5 : 6 | 3 : 4 : 8 | 2560 |

Q:31 X's share of profit in A is what percent of Y and Z's profit in D?

- 1. 19.74 2. 21.11
- 3. 23.04 4. 22.56

Q:32 Find the average of X, Y and Z's profit in businesses E, C and B respectively.

- 1. 988 2. 968
- 3. 898 4. 952

Q:33 What is the ratio of the sum of Y and Z's profit in business A to the sum of Z's profit in business D and E?

- 1. 317 : 569 2. 977 : 1455
- 3. 3112 : 3789 4. 1840 : 2793

Q:34 Profit in business D is what percent more/less than the total profit of A and C?

- 1. 8.75 2. 9.09
- 3. 7.34 4. 7.88

Q:35 Profit of C and D are taken out and investments are added to make a new venture. The ratio of time for their respective investment is 5 : 8 : 10. If they have a profit of 7080, X's share will be?

- 1. 1200 2. 1440
- 3. 1380 4. Cannot be determined

Direction (Q36 – Q40): A user made six calls in a day and the table given below shows the duration (minutes) of phone calls and charges of the phone call.

| Phone calls | Duration (min) | Charges |
|-------------|----------------|----------------|
| 1st | 56 | 15 paisa/min |
| 2nd | 64 | 0.75 paisa/sec |
| 3rd | 48 | 10 paisa/min |
| 4th | 36 | 0.5 paisa/sec |
| 5th | 72 | 0.45 paisa/sec |
| 6th | 66 | 12 paisa/min |

Q:36 If the total charges paid by the user for all six calls together is Rs. 51.3, then what is the average charge per minute of call for the user?

- 1. 18 paisa 2. 12 paisa
- 3. 15 paisa 4. 16 paisa

Q:37 What is the total duration of call by the user for all the six calls together?

- 1. 4.7 hours 2. 5.3 hours
- 3. 4.3 hours 4. 5.7 hours

Q:38 Total charges paid by user for 4th call is what percent more than the charges paid by him for 3rd call?

- 1. 125% 2. 120%
- 3. 140% 4. 130%

Q:39 What is the difference of charges paid by customer for 1st call to the charges paid by him for the 6th call?

- 1. 42 paisa 2. 32 paisa
- 3. 48 paisa 4. 36 paisa

Q:40 What is the total charges paid by user for 2nd and 5th calls together?

1. Rs. 56.28
2. Rs. 48.24
3. Rs. 72.36
4. Rs. 64.32

Directions (Q41 – Q45): The following table contains the results of a survey conducted on 3000 people. A, B, C, D, and E are five toothpaste brands. The percentage amount of people who like toothpaste from a particular brand and the percentage amount of people who like toothpaste and toothpowder from the same brand is also given in the table. All people who like toothpowder necessarily like toothpaste. Study the table and answer the questions accordingly.

| Brands | Percentage of the total people surveyed who liked toothpaste and toothpowder of the brand | Percentage amount of people who like the brand's toothpowder |
|--------|---|--|
| A | 25 | 30 |
| B | 40 | 12.5 |
| C | 5 | 60 |
| D | 14 | 25 |
| E | 16 | 22.5 |

Q:41 What is the ratio of the number of people who liked toothpowders from brands A, C, and D and the number of people who liked toothpaste from brands D and E?

1. 4 : 5
2. 4 : 15
3. 7 : 5
4. 7 : 15

Q:42 What is the total percentage of people who attended the survey who loved toothpowder of any one of the five brands?

1. 22
2. 22.2
3. 22.4
4. 22.6

Q:43 What is the difference between the number of people who love toothpaste but not toothpowder of brands E and D?

1. 53
2. 57
3. 62
4. 68

Q:44 The number of people who liked the toothpaste of brand C but not the toothpowder is what percentage of the number of people who liked the toothpaste of brand E?

1. 10%
2. 12.5%
3. 15%
4. 17.5%

Q:45 What is the total number of people who liked toothpowder of brands A and B?

1. 325
2. 350
3. 375
4. 400

Direction (Q46 – Q50): The below table shows the number of persons getting married in 3 months May, June and July in 4 cities A, B, C and D. Read the data carefully and answer the questions that follow.

| City | May | June | July |
|------|-----|------|------|
| A | 850 | 700 | 950 |
| B | 900 | 650 | 600 |
| C | 550 | 500 | 650 |
| D | 600 | 750 | 850 |

Note: Two persons get married in a marriage.

Q:46 120 marriages that were to be held in city C in the month of June were rescheduled to city A in the month of July. Find the total number of marriages organized in city A in all 3 months.

1. 1310
2. 2620
3. 2560
4. 1370

Q:47 What is the average number of persons getting married per month in these 4 cities in 3 months?

1. 2850
2. 2925
3. 1425
4. 2750

Q:48 If 10% of the marriages scheduled for the month of May in city B got postponed to July then, approximately what percent of total marriages will be organized in city B in July month?

1. 23%
2. 20%
3. 22%
4. 25%

Q:49 Number of marriages organized in 3 months in city C is how much less than the number of marriages organized in July month in all 4 cities?

1. 1250
2. 675
3. 1350
4. 625

Q:50 Find the ratio of the number of persons getting married in the month of June in cities A and D and the number of persons getting married in May and July in city B.

1. 28 : 31
2. 14 : 15
3. 30 : 29
4. 29 : 30

Direction (Q51 – Q55): The table below shows the number of people who were fined in a day in 2 different cities Bengaluru and Hyderabad for violation of the following traffic rules: Drink and driving, Driving without a license, Driving without insurance, Overspeed and Driving without a seatbelt. Study the table carefully and answer the questions that follow.

| Traffic violation | Bengaluru | Hyderabad |
|----------------------------|-----------|-----------|
| Drink and Drive | 320 | 285 |
| Driving without license | 250 | 290 |
| Driving without insurance | 415 | 380 |
| Overspeed | 175 | 165 |
| Driving without a seatbelt | 220 | 245 |

Q:51 In the next month, the fine for driving without a seatbelt is increased by Rs. 500 in Bengaluru and hence the number of people who are fined for driving without a seatbelt will decrease by 10% in the city. If the amount collected from the people who are fined for driving without a seatbelt in Bengaluru increases by Rs. 77000 then, what was the fine for driving without a seatbelt earlier?

- | | |
|------------|-------------|
| 1. Rs. 800 | 2. Rs. 1200 |
| 3. Rs. 900 | 4. Rs. 1000 |

Q:52 The number of people in Hyderabad who are fined for Riding without Helmets is 75% of the number of people in Hyderabad who are fined for Driving without insurance. If the fine for Riding without a Helmet is Rs. 800 in Hyderabad then, how much total amount is collected from the people in Hyderabad who are fined for Riding without a Helmet?

- | | |
|------------------|------------------|
| 1. Rs.2.28 lakhs | 2. Rs.2.25 lakhs |
| 3. Rs.2.22 lakhs | 4. Rs.2.32 lakhs |

Q:53 The ratio of the number of males and females who are fined for Driving without a seatbelt in Bengaluru is 7 : 4 and that in Hyderabad is 5 : 2. What is the difference between the total number of males to the total number of females who are fined for Driving without a seatbelt in Bengaluru and Hyderabad together?

- | | |
|--------|--------|
| 1. 155 | 2. 160 |
| 3. 165 | 4. 175 |

Q:54 The fine amounts for Drink and driving in Bengaluru and Hyderabad are Rs. 2500 and Rs. 3000 respectively and the fine amount for Driving without insurance in both cities is Rs. 500. What is the total amount collected from both cities for violation of these two rules?

- | | |
|----------------|----------------|
| 1. Rs. 2025500 | 2. Rs. 2052500 |
| 3. Rs. 2025000 | 4. Rs. 2525000 |

Q:55 The total number of people who are fined for Driving without a license in both cities is what percentage more than the total number of people who are fined for Overspeed in both cities?

- | | |
|----------|----------|
| 1. 60% | 2. 57.5% |
| 3. 59.4% | 4. 58.8% |

Direction (Q56 – Q60): The below table shows the number of phones serviced by four different service centers A, B, C, and D in 4 months, June, July, and August.

| Months | Service Centre | | | |
|--------|----------------|-----|-----|-----|
| | A | B | C | D |
| May | 120 | 137 | 143 | 135 |
| June | 116 | 134 | 102 | 158 |
| July | 129 | 143 | 65 | 153 |
| August | 145 | 128 | 118 | 146 |

Q:56 Find the difference between the total number of phones serviced in the month of June and July together and the total number of phones serviced in the month of May and August together.

- | | |
|-------|-------|
| 1. 72 | 2. 64 |
| 3. 70 | 4. 62 |

Q:57 Out of the total number of phones serviced by centers B and C together in May, 25% were done for female customers, what is the total number of phones serviced by centers B & C together in May for male customers?

- | | |
|--------|--------|
| 1. 195 | 2. 240 |
| 3. 180 | 4. 210 |

Q:58 If center D charges Rs. 2500 as a servicing fee for each phone, what was the amount collected by center D in August (in lakhs)?

- | | |
|---------------|---------------|
| 1. 3.95 lakhs | 2. 2.75 lakhs |
| 3. 1.25 lakhs | 4. 3.65 lakhs |

Q:59 Find the ratio of total phones serviced by center B in June, July, and August to the total phones serviced by center C in May, June, and July.

- | | |
|------------|------------|
| 1. 79 : 61 | 2. 81 : 62 |
| 3. 83 : 64 | 4. 78 : 65 |

Q:60 Total phones serviced by service centres A and B in the month of June is what percent of the total phones serviced by service centres C and D in the month of August?

- | | |
|----------|----------|
| 1. 93.3% | 2. 98.2% |
| 3. 94.7% | 4. 95.7% |

Directions (Q61 – Q65): The table shows the Budget and revenue of 5 movies that are released in USA. Study the following table carefully and answer the question given below. (\$1 = Rs. 73.84)

| S.No. | Movie Name | Budget(\$) | Revenue (in Rs. approx.) |
|-------|---------------------|------------|--------------------------|
| 1 | Raging Bull | 15K | 2,107,600 |
| 2 | Lawrence of Arabia | 20K | 2,476,801 |
| 3 | Singing In the Rain | 35K | 3,584,401 |
| 4 | Casablanca | 25K | 2,846,001 |
| 5 | The Godfather | 10K | 838,400 |

Q:61 Find the approximate revenue of the movies Singing In the Rain, The Godfather and Raging Bull. (In \$)

- | | |
|-------------|-------------|
| 1. \$88,440 | 2. \$26,245 |
| 3. \$89,654 | 4. \$92,458 |

Q:62 The profit of movies Singing In the Rain and Casablanca together is what percent more than the profit of movies Raging Bull and The Godfather together.

- | | |
|----------|----------|
| 1. 90.9% | 2. 42.5% |
| 3. 56.6% | 4. 81.8% |

Q:63 Find the maximum difference in budget between the two movies in rupees.

- | | |
|--------------|--------------|
| 1. 2,325,001 | 2. 2,846,001 |
| 3. 1,326,521 | 4. 1,846,000 |

Q:64 What is the profit percentage on the movie Lawrence of Arabia? (approx.)

- | | |
|--------|--------|
| 1. 78% | 2. 80% |
| 3. 68% | 4. 71% |

Q:65 Find the average profit on movies The Godfather, Singing In the Rain and Raging Bull. (approx.)

- | | |
|-----------------|-----------------|
| 1. Rs. 6,88,888 | 2. Rs. 7,00,000 |
| 3. Rs. 5,55,444 | 4. Rs 7,99,000 |

Direction (Q66 – Q70): The following table provides information about the account holders in a particular bank. Study the table and answer the questions below.

| Year | Account Holder | Male Holders % | Credit card users | Debit card users |
|------|----------------|----------------|-------------------|------------------|
| 2017 | 550000 | 57% | 555 | 3652 |
| 2018 | 645200 | 46% | 1452 | 1234 |
| 2019 | 425200 | 22% | 625 | 1114 |
| 2020 | 568500 | 63% | 2156 | 2141 |
| 2021 | 365210 | 70% | 1120 | 565 |
| 2022 | 125400 | 45% | 2321 | 2322 |
| 2023 | 362150 | 70% | 4455 | 1214 |
| 2024 | 689230 | 80% | 3562 | 3324 |

Q:66 Find the average of the total account holders in the bank. (approx.)

- | | |
|-----------|-----------|
| 1. 658361 | 2. 123361 |
| 3. 635361 | 4. 466361 |

Q:67 Find the average of the male account holders of the bank from the year 2017 to 2020. (approx.)

- | | |
|-----------|-----------|
| 1. 195498 | 2. 332598 |
| 3. 296538 | 4. 265498 |

Q:68 Find the total of the number of card users in the years 2017 and 2022.

- | | |
|---------|---------|
| 1. 7790 | 2. 5496 |
| 3. 8850 | 4. 9350 |

Q:69 Find the average of the total users of credit cards from the year 2018 to 2024. (approx.)

- | | |
|---------|---------|
| 1. 2457 | 2. 2242 |
| 3. 2352 | 4. 2792 |

Q:70 Find the average of the total female account holders in the years 2018 and 2023. (approx.)

- | | |
|-----------|-----------|
| 1. 228527 | 2. 965227 |
| 3. 632527 | 4. 298567 |

Directions (Q71 – Q75): The table given below shows the ratio of boys and girls, the percentage of students scoring below 40% marks (of total students), and the percentage of students scoring in the range of 40 - 80% marks. It also gives the number of students scoring more than 80% marks. Answer the question on the basis of the given information.

| School | Ratio (Boys : girls) | Less than 40% (in %) | 40% - 80% (in %) | more than 80% (number of students) |
|--------|----------------------|----------------------|------------------|------------------------------------|
| A | 7 : 5 | 28 | 63 | 162 |
| B | 3 : 2 | 14 | 73 | 195 |
| C | 5 : 6 | 21 | 57 | 242 |
| D | 7 : 8 | 12 | 64 | 396 |
| E | 5 : 4 | 18 | 68 | 315 |

Q:71 The number of girl students in school D is what percent more or less than number of boy students in school A?

- | | |
|----------|----------|
| 1. 16.2% | 2. 17.8% |
| 3. 15.4% | 4. 14.8% |

Q:72 What is the percentage of total failed students in school B and C combined if failed student score less than 40% mark (rounding off to nearest integer)?

- | | |
|--------|--------|
| 1. 16% | 2. 17% |
| 3. 18% | 4. 19% |

Q:73 What is the ratio of the students scoring more than 80% in schools A and C combined to the students scoring less than 40% in E and D?

- | | |
|--------------|--------------|
| 1. 404 : 603 | 2. 55 : 101 |
| 3. 155 : 201 | 4. 404 : 601 |

Q:74 What is the average number of girls in all the schools combined?

- | | |
|--------|--------|
| 1. 746 | 2. 796 |
| 3. 776 | 4. 766 |

Q:75 If 40% of the girls in school C score more than 80% marks. Find the number of boys scoring less than 80% marks.

- | | |
|--------|--------|
| 1. 488 | 2. 498 |
| 3. 492 | 4. 486 |

Direction (Q76 – Q80): Study the following information carefully and answer the given questions. The following table shows the total number of students studying in 3 different schools and the total number of students in class 10.

| School | Total number of students (Male + Female) | Total number of students (Male + Female) in class 10 | Total number of students in class 10 |
|--------|--|--|--------------------------------------|
| A | 250 | 48 | 12 |
| B | 480 | 64 | 10 |
| C | 360 | 80 | 25 |

Q:76 In school C, the number of female students in class other than 10th is 101. What percent of students in School C are female?

- 1. 45% 2. 50%
- 3. 40% 4. 35%

Q:77 Find the difference between the number of male students in class 10 of School A to that of School B.

- 1. 18 2. 24
- 3. 36 4. 40

Q:78 Find the respective ratio between the total number of students (Male + Female) in class 10 of School C and the total number of students (Male + Female) in all the classes together in School B.

- 1. 1 : 12 2. 1 : 16
- 3. 1 : 6 4. 1 : 8

Q:79 In the given schools, classes 8, 9, and 10th are there. The ratio of the number of students in class 8 to that of class 9 in School A and B together is 55 : 48. Then find the total number of students in class 8 in School A and B together.

- 1. 370 2. 330
- 3. 360 4. 420

Q:80 The total number of students in Class 10 of School B is what percentage less than the total number of students in School A?

- 1. 68.5% 2. 70.8%
- 3. 66.2% 4. 74.4%

Directions (Q81 – Q85): Study the following information carefully and answer the questions. The below table shows the investment of Pratiksha, Rajeev, and Chaman in three different shares.

| Shares | Amount invested by Pratiksha | Amount invested by Rajeev | Amount invested by Chaman |
|-------------|------------------------------|---------------------------|---------------------------|
| TATA Steel | 15890 | 24500 | 78500 |
| TATA Motors | 25560 | 45800 | 15620 |
| TATA Power | 15870 | 55000 | 20050 |

Q:81 What is the average amount invested by Rajeev in TATA Steel and TATA Motors shares?

- 1. Rs.30010 2. Rs.35100
- 3. Rs.35510 4. Rs.35150

Q:82 The total amount invested by Pratiksha is how much percent less than the total amount invested by Chaman?

- 1. 49.80% 2. 50.10%
- 3. 49.79% 4. 50.01%

Q:83 What is the difference between the amount invested by Pratiksha in TATA Steel and Power to the amount invested by Chaman in TATA Power and by Rajeev in TATA Motors?

- 1. Rs.34500 2. Rs.34090
- 3. Rs.34090 4. Rs.34600

Q:84 If Kiara invested 15% of the amount invested by Pratiksha in TATA Steel and 17% of the amount invested by Chaman in TATA Motors, then find the total amount invested by Kiara.

- 1. Rs.5038.9 2. Rs.5040.9
- 3. Rs.5045.3 4. Rs.5035.4

Q:85 If Chaman deposits 25% of the amount invested in TATA Steel in the bank on simple interest at the rate of 5% for 3 years then, find the amount earned by the bank is how much more than the amount invested in TATA Motors by Chaman.

- 1. Rs.6448.75 2. Rs.6948.75
- 3. Rs.5648.75 4. Rs.6498.75

Directions (Q86 – Q90): After Covid lockdown Microsoft plan trip for all employees like CEO, Manager, HR, Team Head and employee of a company. Microsoft plan foreign tours of New York, USA, London, Philippines and New Zealand but the company ask everyone to provide the full amount of spend in all tour so that company can give that amount of spend. The amount spent on foreign tours of New York, USA, London, Philippines and New Zealand, done by CEO, Manager, HR, Team Head and employee of Microsoft shows in below table.

| | CEO | Manager | HR | Team Head | Employee |
|-------------|--------|---------|-------|-----------|----------|
| New York | 75000 | _____ | 10000 | 70000 | 170000 |
| USA | 125000 | 36000 | 10000 | 32000 | 2500000 |
| London | _____ | _____ | 34000 | 22000 | 600000 |
| Philippines | 120000 | 27000 | 7000 | 45000 | 120000 |
| New Zealand | 98000 | 15000 | 5100 | 30000 | 800000 |

Q:86 The average spend of CEO is 278000. Find the ratio of Manager's spend in New York and CEO's minimum spend if the ratio of the CEO's London spend and Manager's New York spend is 90 : 31.

- 1. 31:75 2. 75:31
- 3. 70:31 4. 7:75

Q:87 What is the average of Manager's spend if he spends 200% more than HR's Philippines spend in his London visit?

- 1. 22000 2. 25000
- 3. 26000 4. 28000

Q:88 If there are 20 employees in the foreign tours then find the average spend of one employee.

- 1. 41000 2. 41500
- 3. 50000 4. 41900

Q:89 Find the ratio of average spend in New Zealand and the sum of USA and London spend.

- 1. 3752 : 3470 2. 37: 347
- 3. 342: 3752 4. 347: 37

Q:90 The average spend of Team head is how much per cent more than the average spend of HR in all visit.

- 1. 77.96% 2. 72%
- 3. 77.67% 4. 73.76

Directions (Q91 – Q95): The following table shows the number of medals won by country A in different years. The number of males and females won are given in percentage and the medals won are given in the ratio of their colour. Consider that each male or each female wins only one medal. Study the table and answer the following question.

| Year | Number of Medals | Male | Female | Gold : Silver : Bronze |
|------|------------------|------|--------|------------------------|
| 2015 | 500 | 45% | 55% | 2 : 3 : 5 |
| 2017 | 450 | 40% | 60% | 3 : 5 : 7 |
| 2019 | 600 | 35% | 65% | 3 : 5 : 4 |
| 2021 | 400 | 43% | 57% | 2 : 5 : 1 |
| 2023 | 300 | 25% | 75% | 1 : 2 : 3 |

Q:91 The number of bronze medals won in 2015 are what percent of the total number of medals won in all the years combined?

- 1. 12.11% 2. 13.11%
- 3. 9.11% 4. 11.11%

Q:92 What is 47% of the sum of the number of female medalists in 2017 and the number of silver medals won in 2021?

- 1. 254.4 2. 264.4
- 3. 249.4 4. 244.4

Q:93 What is the 93% of the total number of silver medals won in all the years combined?

- 1. 876 2. 893
- 3. 837 4. 851

Q:94 What is the average of the total number of bronze medals won in all the years combined?

- 1. 172 2. 178
- 3. 176 4. 179

Q:95 What is the ratio of the total number of male medalists to that of the total number of female medalists in all the years combined?

- 1. 411 : 699 2. 431 : 697
- 3. 431 : 694 4. 697 : 431

Directions (Q96 – Q100): Study the following table and answer the question given below. Some value are missing you have to calculate these values as per given data. The performance of six Indian batsmen internationally is as following -

| Batsman | No. of matches played | Average score | Total balls faced | Strike rate |
|---------|-----------------------|---------------|-------------------|-------------|
| Shikhar | 8 | — | — | 129.6 |
| Virat | 20 | 81 | — | — |
| Dhoni | — | 76 | 800 | 114 |
| Hardik | — | — | — | 72 |
| Shreyas | 56 | 110 | 2560 | — |
| Ajinkya | — | — | — | 66 |

Note - (Strike rate = (Total runs scored/Total balls faced) × 100)

Q:96 What is the total number of matches played by Dhoni?

- 1. 13 2. 14
- 3. 9 4. 12

Q:97 Virat faced an equal number of balls in the first 10 matches and the last 10 matches. If his strike rate in the first 10 matches and the last 10 matches are 120 and 150 respectively, then what is the total number of balls faced by him?

- 1. 1000 2. 800
- 3. 1100 4. 1200

Q:98 The total number of balls faced by Shikhar is 74 less than the total number of runs scored by him. What is the average score of Shikhar?

- 1. 45 2. 38.5
- 3. 40.5 4. 39

Q:99 If the runs scored by Shreyas in the last 3 matches of the tournament are not considered, his average runs scored in the tournament decreased by 9. If the runs scored by Shreyas in the 54th and 55th match are below 168 but more than 165 (no two scores among these scores are equal), what is the minimum possible runs scored by Shreyas in the 56th match?

- 1. 384 2. 474
- 3. 160 4. 182

Q:100 The ratio of the total number of balls faced by Hardik and Ajinkya is 3 : 4. The total number of runs scored by Ajinkya in the tournament is what percent more than the total runs scored by Hardik?

- 1. 200/9% 2. 200/5%
- 3. 52/7% 4. 115/9%

Answer Key

| | | | | |
|---------|---------|---------|---------|----------|
| 1. (1) | 2. (3) | 3. (2) | 4. (4) | 5. (4) |
| 6. (3) | 7. (2) | 8. (2) | 9. (4) | 10. (4) |
| 11. (2) | 12. (4) | 13. (4) | 14. (1) | 15. (2) |
| 16. (4) | 17. (4) | 18. (4) | 19. (1) | 20. (4) |
| 21. (3) | 22. (4) | 23. (3) | 24. (1) | 25. (4) |
| 26. (2) | 27. (1) | 28. (4) | 29. (3) | 30. (2) |
| 31. (2) | 32. (2) | 33. (4) | 34. (3) | 35. (4) |
| 36. (3) | 37. (4) | 38. (1) | 39. (3) | 40. (2) |
| 41. (4) | 42. (4) | 43. (2) | 44. (2) | 45. (3) |
| 46. (4) | 47. (1) | 48. (3) | 49. (2) | 50. (4) |
| 51. (4) | 52. (1) | 53. (3) | 54. (2) | 55. (4) |
| 56. (1) | 57. (4) | 58. (4) | 59. (2) | 60. (3) |
| 61. (1) | 62. (4) | 63. (4) | 64. (3) | 65. (2) |
| 66. (4) | 67. (4) | 68. (3) | 69. (2) | 70. (1) |
| 71. (1) | 72. (2) | 73. (1) | 74. (4) | 75. (2) |
| 76. (4) | 77. (1) | 78. (3) | 79. (2) | 80. (4) |
| 81. (4) | 82. (3) | 83. (2) | 84. (1) | 85. (2) |
| 86. (1) | 87. (3) | 88. (4) | 89. (1) | 90. (3) |
| 91. (4) | 92. (4) | 93. (3) | 94. (1) | 95. (3) |
| 96. (4) | 97. (4) | 98. (3) | 99. (2) | 100. (1) |

Answers and Solutions

Q:1 The correct answer is **option 1 i.e. Rs. 12330.**

From the table:

During the New year sale, Flipkart offers 25% discount, Amazon offers 20% discount and Swiggy offers 20% discount.

Hence,

Total amount of money paid

$$\begin{aligned} &= 5400 \times 0.75 + 9750 \times 0.8 + 600 \times 0.8 \\ &= 4050 + 7800 + 480 \\ &= \text{Rs. } 12330 \end{aligned}$$

Q:2 The correct answer is **option 3 i.e. Rs. 222.**

From the table:

Mynta offers 15% and 20% discounts on new year sale and Independence Day sale respectively.

So,

Marked price of shoes bought during new year sale = $3774/0.85 = \text{Rs. } 4440$

Hence,

Additional discount Amit would have received if he had bought those shoes during the Independence Day sale = $4440 \times (0.2 - 0.15) = \text{Rs. } 222$

Q:3 The correct answer is **option 2 i.e. Rs. 1660.**

From the table:

During the Independence Day sale, Zomato offers a 25% discount and Swiggy offers a 15% discount

So,

The total value of orders without discount = $175/0.25 + 144/0.15$

$$\Rightarrow 700 + 960 = \text{Rs. } 1660$$

Q:4 The correct answer is **option 4 i.e. Rs. 2150.**

From the table:

Total money paid

$$\begin{aligned} &\Rightarrow 500 \times 0.9 + 500 \times 0.95 + 500 \times 0.9 + 500 \times 0.8 + \\ &500 \times 0.75 \\ &\Rightarrow 450 + 475 + 450 + 400 + 375 = \text{Rs. } 2150 \end{aligned}$$

Q:5 The correct answer is **option 4 i.e. Rs. 12950.**

From the table:

During the Diwali sale, Flipkart offers 20% discount and Amazon offers 30% discount.

So,

Marked price of TV bought by the person from Flipkart = $17600/0.8 = \text{Rs. } 22000$

And

Marked price of refrigerator bought by the person from Amazon = $19950/0.7 = \text{Rs. } 28500$

Hence,

$$\text{Total discount} = [22000 + 28500] - [17600 + 19950] = \text{Rs. } 12950$$

Q:6 The correct answer is **option 3 i.e. 87%.**

Let the Cost price of the article (A) = $\text{Rs. } 100$

$$\text{Marked price} = 100 + 120\% \text{ of } 100 = 100 + 120 = 220$$

$$\text{Discount \%} = 35\%$$

$$\text{Selling price} = (100 - 35)\% \text{ of } 220 = \text{Rs. } 143$$

$$\text{Profit} = 143 - 100 = 43\%$$

Let the Cost price of the article (B) = $\text{Rs. } 100$

$$\text{Marked price} = 100 + 80\% \text{ of } 100 = 100 + 80 = \text{Rs. } 180$$

$$\text{Discount \%} = 20\%$$

$$\text{Selling price} = (100 - 20)\% \text{ of } 180 = \text{Rs. } 144$$

$$\text{Profit} = 144 - 100 = 44\%$$

$$\therefore \text{Required Sum} = 43\% + 44\% = 87\%$$

Q:7 The correct answer is **option 2 i.e. Rs 4140.**

Cost price of article C = $\text{Rs. } 3000$

$$\text{Marked price} = (100 + 100)\% \text{ of } 3000 = \text{Rs. } 6000$$

$$\text{Discount \%} = 31\%$$

$$\therefore \text{Selling price} = (100 - 31)\% \text{ of } 6000 = \text{Rs. } 4140$$

Q:8 The correct answer is **option 2 i.e. 287 : 396.**

Cost price of article D = $\text{Rs. } 1640$

$$\text{Marked price} = (100 + 75)\% \text{ of } 1640 = \text{Rs. } 2870$$

Cost price of article B = $\text{Rs. } 2200$

$$\text{Marked price} = (100 + 80)\% \text{ of } 2200 = \text{Rs. } 3960$$

$$\therefore \text{Ratio} = 2870 : 3960 = 287 : 396$$

Q:9 The correct answer is **option 4 i.e. Rs. 651.2 .**

Cost price of article B = $\text{Rs. } 2200$

$$\text{Marked price} = (100 + 80)\% \text{ of } 2200 = \text{Rs. } 3960$$

$$\text{Discounts} = 20\% \text{ and } 10\%$$

$$\text{Total discount} = 20\% + 10\% - (20 \times 10)/100 = 28\%$$

$$\text{Selling price} = (100 - 28)\% \text{ of } 3960 = \text{Rs. } 2851.2$$

$$\therefore \text{Profit} = \text{SP} - \text{CP} = 2851.2 - 2200 = \text{Rs. } 651.2$$

Q:10 The correct answer is **option 4 i.e. None of these.**

$$\text{Total cost price} = 1850 + 2200 + 3000 + 1640 = \text{Rs. } 8690$$

$$\therefore \text{Average cost price} = 8690/4 = \text{Rs. } 2172.5$$

Q:11 The correct answer is **Option 2 i.e. Pepsi.**
 The Cold Drink which will have the highest sale is in more demand
 Total sale of Sprite = $200 + 250 + 230 + 150 = 830$
 Total sale of Thumbs Up = $350 + 200 + 280 + 200 = 1030$
 Total sale of Pepsi = $300 + 400 + 500 + 250 = 1450$
 Total sale of Fanta = $100 + 150 + 200 + 120 = 570$
 Total sale of Slice = $150 + 250 + 300 + 350 = 1050$
 Hence according to the table, the highest sale is of Pepsi so it's in more demand

Q:12 The correct answer is **Option 4 i.e. Rs. 8700.**
 Total earned in May = $200 \times 15 = 3000$
 Total earned in July = $230 \times 15 = 3450$
 Total earned in August = $150 \times 15 = 2250$
 Total earned in all the three months = $3000 + 3450 + 2250 = \text{Rs. } 8700$

Q:13 The correct answer is **Option 4 i.e. 1305.**
 Total sales in the month of May and July = $200 + 350 + 300 + 100 + 150 + 230 + 280 + 500 + 200 + 300 = 2610$
 The average sale in the two months = $2610/2 = 1305$

Q:14 The correct answer is **Option 1 i.e. July and August.**
 Total sales in may = $200 + 350 + 300 + 100 + 150 = 1100$
 Total sales in June = $250 + 200 + 400 + 150 + 250 = 1250$
 Total sales in July = $230 + 280 + 500 + 200 + 300 = 1510$
 Total sales in August = $150 + 200 + 250 + 120 + 350 = 1070$
 According to the table, July recorded the highest sale and August recorded the lowest sale.

Q:15 The correct answer is **Option 2 i.e. 52%.**
 Total sales of Fanta = $100 + 150 + 200 + 120 = 570$
 Total sales in the month of may = $200 + 350 + 300 + 100 + 150 = 1100$
 $\text{Percentage} = (X/100) \times 1100 = 570$
 $\Rightarrow X = (570 \times 100)/1100 = 51.81\%$
 $\Rightarrow X = 52\% \text{ approx}$

Q:16 The correct answer is **option 4 i.e. 86.3%.**
 Runs scored by boundaries in 5th match = $7/(7 + 9) \times 304 = 133$
 Runs scored by running in 4th match = $11/(3 + 11) \times 196 = 154$
 Relative percentage = $133/154 \times 100 = 86.3\%$

Q:17 The correct answer is **option 4 i.e. 148.**
 Runs scored in 1st match through running = $4/(5 + 4) \times 279 = 124$
 Runs scored in 2nd match through running = $7/(9 + 7) \times 256 = 112$
 Runs scored in 3rd match through running = $6/(5 + 6) \times 330 = 180$
 Runs scored in 4th match through running = $11/(3 + 11) \times 196 = 154$
 Runs scored in 5th match through running = $9/(7 + 9) \times 304 = 171$
 Total runs scored through running = $124 + 112 + 180 + 154 + 171 = 741$
 Required average = $741/5 = 148.2 \text{ or } 148$

Q:18 The correct answer is **option 4 i.e. 2 : 5.**
 Runs scored in 3rd match = 330
 Ratio of runs by boundaries to running = 5 : 6
 Hence, Runs through running = $6/(6 + 5) \times 330 = 180$
 Runs by Boundaries = $330 - 180 = 150$
 Now, Let the number of 6's be y
 then, the number of 4's (y + 5)
 Now, $6 \times y + 4 \times (y + 5) = 150$
 or, $10y + 20 = 150$
 $y = 13$
 Hence, number of 4's = $13 + 5 = 18$
 Runs scored through 4's = $18 \times 4 = 72$
 Ratio of runs through 4's to runs by boundaries = $72 : 180 = 2 : 5$

Q:19 The correct answer is **option 1 i.e. 47.9%.**
 Runs scored in 1st match = 279
 Ratio of run by boundaries to running = 5 : 4
 Hence, Runs by boundaries = $5/(5 + 4) \times 279 = 155$
 Runs scored in 3rd match = 330
 Ratio of run by boundaries to running = 5 : 6
 Hence, Runs by boundaries = $5/(5 + 6) \times 330 = 150$
 Runs scored in 5th match = 304
 Ratio of run by boundaries to running = 7 : 9
 Hence, Runs by boundaries = $7/(7 + 9) \times 304 = 133$
 Total runs scored in these matches = $279 + 330 + 304 = 913$
 Total runs scored through boundaries = $155 + 150 + 133 = 438$
 Percentage of runs through boundaries = $438/913 \times 100 = 47.9\%$

Q:20 The correct answer is **option 4 i.e. 39.**
 Total runs scored = $279 + 256 + 330 + 196 + 304 = 1365$
 Total Wickets Fallen = $6 + 8 + 4 + 10 + 7 = 35$
 Required runs = $1365/35 = 39$

Q:21 The correct answer is **option 3** i.e. **134 : 165**.

$$\begin{aligned}\text{Total cricket players in A and B} &= (130 + 540) = 670 \\ \text{Percentage of kids in society D playing Hockey} &= 38\% \\ \text{Percentage of kids in society C playing Cricket} &= (100 - 38) = 62\% \\ \Rightarrow 62\% \text{ of D} &= 465 \\ \Rightarrow D &= (465 \times 100)/62 = 750 \\ \text{Kids playing Hockey in D} &= 38\% \text{ of } 750 = 285 \\ \text{Percentage of kids in society E playing Hockey} &= 45\% \\ \text{Percentage of kids in society E playing Cricket} &= (100 - 45) = 55\% \\ \Rightarrow 55\% \text{ of E} &= 660 \\ \Rightarrow E &= (660 \times 100)/55 = 1200 \\ \text{Kids playing Hockey in E} &= 45\% \text{ of } 1200 = 540 \\ \text{Sum} &= 540 + 285 = 825 \\ \text{Ratio} &= 670 : 825 = 134 : 165\end{aligned}$$

Q:22 The correct answer is **option 4** i.e. **None of these**.
Sum of cricket playing kids in five societies = $130 + 540 + 210 + 465 + 660 = 2005$
Average = Sum of observations/Number of observations = $2005/5 = 401$

Q:23 The correct answer is **option 3** i.e. **177.78%**.
Let the total number of kids in society B = 100
Number of kids playing Hockey = $64\% \text{ of } 100 = 64$
Kids playing cricket = $100 - 64 = 36$
Required percentage = $(64/36) \times 100 = 177.78\%$

Q:24 The correct answer is **option 1** i.e. **610**.
Percentage of kids in society A playing Hockey = 48%
Percentage of kids in society A playing Cricket = $100 - 48 = 52\%$
 $\Rightarrow 52\% \text{ of A} = 130$
 $\Rightarrow A = (130 \times 100)/52 = 250$
Kids playing Hockey in A = $48\% \text{ of } 250 = 120$
Percentage of kids in society C playing Hockey = 70%
Percentage of kids in society C playing Cricket = $100 - 70 = 30\%$
 $\Rightarrow 30\% \text{ of C} = 210$
 $\Rightarrow C = (210 \times 100)/30 = 700$
Kids playing Hockey in C = $70\% \text{ of } 700 = 490$
Required sum = $(490 + 120) = 610$

Q:25 The correct answer is **option 4** i.e. **1000**.
Let the total number of kids in society C be y
Total percentage of kids playing hockey = 70%
Total percentage of kids playing cricket = $(100 - 70) = 30\%$
According to the question,
Total number of kids playing cricket and hockey in society C
 $\Rightarrow 30\% \text{ of } x = 210$
 $\Rightarrow x = 700$
It is given that only 70% percent of kids staying in society C play games
 $\Rightarrow 70\% \text{ of } y = 700$
 $\Rightarrow y = 1000$
Hence, the total number of kids in society C is 1000

Q:26 The correct answer is **option 2** i.e. **24%**.

$$\begin{aligned}\text{The number of people working on the third floor} &= 450 \\ \text{The total number of people working on the other three floors} &= 500 + 800 + 600 = 1900 \\ \text{Percentage} &= (450/1900) \times 100 = 23.68 \% \\ \text{i.e. } 24\% \text{ approx.}\end{aligned}$$

Hence, **24%** is the correct answer.

Q:27 The correct answer is **option 1** i.e. **6 : 7**.

Find the number of experts from the ratio given in the table
The number of experts on the first floor = $(3/5) \times 500 = 300$
The number of experts on the fourth floor = $(7/12) \times 600 = 350$
The ratio = $300/350$ i.e. **6 : 7**
Hence, **6 : 7** is the correct answer.

Q:28 The correct answer is **option 4** i.e. **950**.

Find the number of managers from the ratio of managers and experts
Number of managers on the first floor = $(2/5) \times 500 = 200$
Number of managers on the second floor = $(3/8) \times 800 = 300$
Number of managers on the third floor = $(4/9) \times 450 = 200$
Number of managers on the fourth floor = $(5/12) \times 600 = 250$
So, the total number of managers on all the floors = $200 + 300 + 200 + 250 = 950$

Q:29 The correct answer is **option 3** i.e. **320**.

The number of people working in the day shift on the first floor = $(60/100) \times 500 = 300$
The number of people working in the day shift on the second floor = $(40/100) \times 800 = 320$
The number of people working in the day shift on the third floor = $(80/100) \times 450 = 360$
The number of people working in the day shift on the fourth floor = $(50/100) \times 600 = 300$
The average number of people working in day shift
 $\Rightarrow (300 + 320 + 360 + 300)/4 = 1280/4 = 320$

Q:30 The correct answer is **option 2** i.e. **570**.

Percentage of people working in day shift on the second floor = 40%
So the percentage of people working in night shift = 60%
So, the number of people working in night shift = $(60/100) \times 800 = 480$
Percentage of people working in day shift on the third floor = 80%
So, the number of people working in night shift = 20%
So, the number of people working in night shift = $(20/100) \times 450 = 90$
Hence, the total number of people working in night shift on the second and third floor
 $\Rightarrow 480 + 90 = 570$

Q:31 The correct answer is **option 2** i.e. **21.11**.

For A:

Ratio of profit = investment × time ratio.

$$\text{Ratio of profit} = 13 \times 1 : 8 \times 2 : 10 \times 3 = 13 : 16 : 30$$

$$X's \text{ share} = (13/(13 + 16 + 30)) \times 4720 = \text{Rs } 1040$$

For D:

Ratio of profit = investment × time ratio.

$$\text{Ratio of profit} = 10 \times 11 : 5 \times 7 : 18 \times 9 = 110 : 35 : 162$$

$$\text{Profit of Y and Z} = [(35 + 162)/(110 + 35 + 162)] \times 7675 = \text{Rs } 4925$$

$$\text{Required percentage} = (1040/4925) \times 100 = 21.12\%$$

Q:32 The correct answer is **option 2** i.e. **968**

For E:

$$\text{Ratio of profit} = 4 \times 3 : 5 \times 4 : 6 \times 8 = 12 : 20 : 48$$

$$X's \text{ share of profit} = (12/80) \times 2560 = \text{Rs } 384$$

For C:

$$\text{Ratio of profit} = 2 \times 6 : 3 \times 8 : 5 \times 9 = 12 : 24 : 45$$

$$\text{Profit of Y} = (24/81) \times 2430 = \text{Rs } 720$$

For B:

$$\text{Ratio of profit} = 7 \times 2 : 4 \times 4 : 9 \times 5 = 14 : 16 : 45$$

$$\text{Profit of Z} = (45/75) \times 3000 = \text{Rs } 1800$$

$$\text{Required average} = (384 + 1800 + 720)/3 = 2904/3 = \text{Rs } 968$$

Q:33 The correct answer is **option 4** i.e. **1840 : 2793**.

For A:

Ratio of profit = investment × time ratio.

$$\text{Ratio of profit} = 13 \times 1 : 8 \times 2 : 10 \times 3 = 13 : 16 : 30$$

$$X's \text{ share} = (13/(13 + 16 + 30)) \times 4720 = \text{Rs } 1040$$

$$Y \text{ and } Z's \text{ share} = 4720 - 1040 = \text{Rs } 3680$$

For E:

$$\text{Ratio of profit} = 4 \times 3 : 5 \times 4 : 6 \times 8 = 12 : 20 : 48$$

$$Z's \text{ profit} = (48/80) \times 2560 = \text{Rs } 1536$$

For D:

Ratio of profit = investment × time ratio.

$$\text{Ratio of profit} = 10 \times 11 : 5 \times 7 : 18 \times 9 = 110 : 35 : 162$$

$$\text{Profit of Z} = (162/307) \times 7675 = \text{Rs } 4050$$

$$\text{Required ratio} = 3680 : (4050 + 1536) = 3680 : 5586 = 1840 : 2793$$

Q:34 The correct answer is **option 3** i.e. **7.34**.

$$\text{Total profit of A and C} = 4720 + 2430 = \text{Rs } 7150$$

$$\text{Profit of D} = 7675$$

$$\text{Difference} = 7675 - 7150 = \text{Rs } 525$$

$$\text{Required percentage} = (525/7150) \times 100 = 7.34\%$$

Q:35 The correct answer is **option 4** i.e. **Cannot be determined**.

Ratio of investment in D = 10 : 5 : 18 or 10x, 5x and 18x

The ratio of investment in C = 2 : 3 : 5 or 2y, 3y, and 5y.

Investment in new venture = $(10x + 2y) : (5x + 3y) : (18x + 5y)$

Clearly, we don't have a proper ratio as x and y are not known.

Profit cannot be determined individually.

Q:36 The correct answer is **option 3** i.e. **15 paisa**.

Total duration of call by the user for all the six calls together = $56 + 64 + 48 + 36 + 72 + 66$

$$= 342 \text{ min}$$

Total charges paid by the user for all six calls together = $\text{Rs. } 51.3$

The average charge per minute of call = $51.3/342$

$$= \text{Rs } 0.15$$

$$= 15 \text{ paisa}$$

Q:37 The correct answer is **option 4** i.e. **5.7 hours**.

Total duration of call by the user for all the six calls together = $56 + 64 + 48 + 36 + 72 + 66$

$$= 342 \text{ min}$$

$$= 342/60 \text{ hours}$$

$$= 5.7 \text{ hours}$$

Q:38 The correct answer is **option 1** i.e. **125%**.

Total charges paid by user for 4th call = $36 \times (0.5 \times 60)$

$$= 1080 \text{ paisa}$$

Total charges paid by user for 3rd call = 48×10

$$= 480 \text{ paisa}$$

$$\text{Required percent} = [(1080 - 480)/480] \times 100$$

$$= 125\%$$

Q:39 The correct answer is **option 3** i.e. **48 paisa**.

Total charges paid by customer for 1st call = $56 \times 15 = 840 \text{ paisa} = \text{Rs. } 8.4$

Total charges paid by customer for 6th call = $66 \times 12 = 792 \text{ paisa} = \text{Rs. } 7.92$

$$\text{Required difference} = 8.4 - 7.92 = \text{Rs } 0.48 = 48 \text{ paisa}$$

Q:40 The correct answer is **option 2** i.e. **Rs. 48.24**.

Total charges paid by user for 2nd call = $64 \times (0.75 \times 60) = 2880 \text{ paisa} = \text{Rs. } 28.8$

Total charges paid by user for 5th call = $72 \times (0.45 \times 60) = 1944 \text{ paisa} = \text{Rs. } 19.44$

$$\text{Total charges} = 28.8 + 19.44 = \text{Rs. } 48.24$$

Q:41 The correct answer is **Option 4** i.e. **7 : 15**.

Number of people who liked toothpowder of brand A

$$\Rightarrow 3000 \times 30/100 \times 25/100 = 225$$

Number of people who liked the toothpowder of brand C

$$\Rightarrow 3000 \times 5/100 \times 60/100 = 90$$

Number of people who liked the toothpowder of brand D

$$\Rightarrow 3000 \times 14/100 \times 25/100 = 105$$

Total number of people who loved toothpowders of brands A, C, and D

$$\Rightarrow 225 + 90 + 105 = 420$$

Total number of people who loved toothpaste of brands D and E

$$\Rightarrow 3000 \times (14 + 16)/100 = 900$$

$$\text{Required ratio} = 420 : 900 = 7 : 15$$

Q:42 The correct answer is **Option 4 i.e. 22.6.**

Number of people who liked the toothpowder of brand A
 $\Rightarrow 30/100 \times 25/100 \times 3000 = 225$
Number of people who liked the toothpowder of brand B
 $\Rightarrow 12.5/100 \times 40/100 \times 3000 = 150$
Number of people who liked the toothpowder of brand C
 $\Rightarrow 5/100 \times 60/100 \times 3000 = 90$
Number of people who liked the toothpowder of brand D
 $\Rightarrow 14/100 \times 25/100 \times 3000 = 105$
Number of people who liked toothpowder of brand E
 $\Rightarrow 16/100 \times 22.5/100 \times 3000 = 108$
Total number of people who liked toothpowder = 678
Required percentage = $678/3000 \times 100 = 22.6\%$

Q:43 The correct answer is **option 2 i.e. 57.**

Number of people who liked toothpaste but not toothpowder of brand D
 $\Rightarrow 14/100 \times (100 - 25)/100 \times 3000 = 315$
Number of people who liked toothpaste but not toothpowder of brand E
 $\Rightarrow 16/100 \times (100 - 22.5)/100 \times 3000 = 372$
Required difference = $(372 - 315) = 57$

Q:44 The correct answer is **Option 2 i.e. 12.5%.**

Number of people who liked toothpaste but not toothpowder of brand C
 $\Rightarrow 3000 \times 5/100 \times (100 - 60)/100 = 60$
Number of people who loved toothpaste of brand E = $16/100 \times 3000 = 480$
Required percentage = $60/480 \times 100 = 12.5\%$

Q:45 The correct answer is **Option 3 i.e. 375.**

Number of people who liked toothpowder of brand A
 $\Rightarrow 3000 \times 30/100 \times 25/100 = 225$
Number of people who liked the toothpowder of brand B
 $\Rightarrow 3000 \times 12.5/100 \times 40/100 = 150$
Total number of people who liked toothpowder of brands A and B
 $\Rightarrow (225 + 150) = 375$ people

Q:46 The correct answer is **option 4 i.e. 1370.**

A total of 120 marriages got rescheduled in city C in June month to city A in the month of July
So, Number of marriages organized in city A in all 3 months = $(850 + 700 + 950)/2 + 120$
 $\Rightarrow (1250 + 120) = 1370$

Q:47 The correct answer is **option 1 i.e. 2850.**

Total number of persons getting married in the month of May in 4 cities = $850 + 900 + 550 + 600 = 2900$
Total number of persons getting married in the month of June in 4 cities = $700 + 650 + 500 + 750 = 2600$
Total number of persons getting married in the month of July in 4 cities = $950 + 600 + 650 + 850 = 3050$
Hence,
Required average = $(2900 + 2600 + 3050)/3 = 2850$

Q:48 The correct answer is **option 3 i.e. 22%.**

From the table:
Total marriages scheduled for the month of May in city B = $900/2 = 450$
So, the number of marriages postponed to July in city B = $450 \times 0.1 = 45$
So,
Total number of marriages organized in city B in July = $600/2 + 45 = 345$
From the table we get,
Total marriages to be organized in July month = $(950 + 650 + 850)/2 + 345 = 1570$
Hence, the required percentage
 $\Rightarrow [345/1570] \times 100 = 21.97$ or 22%

Q:49 The correct answer is **option 2 i.e. 675.**

Number of marriages organized in 3 months in city C
 $\Rightarrow (550 + 500 + 650)/2 = 850$
Number of marriages organized in July month in all 4 cities
 $\Rightarrow (950 + 600 + 650 + 850)/2 = 1525$
Hence, the required difference = $(1525 - 850) = 675$

Q:50 The correct answer is **option 4 i.e. 29 : 30.**

From the table:
Total number of persons getting married in the month of June in cities A and D = $(700 + 750) = 1450$
Total number of persons getting married in May and July in city B = $(900 + 600) = 1500$
Hence, the required ratio = $1450 : 1500 = 29 : 30$

Q:51 The correct answer is **Option 4 i.e. Rs. 1000.**

In the next month, the fine for driving without a seatbelt is increased by Rs. 500 and the number of people who are fined for driving without a seatbelt will decrease by 10% in Bengaluru

From the table:
Number of people who are fined for driving without a seatbelt = 220
Suppose the fine for driving without a seatbelt = Rs. X
So, next month:
Number of people who are fined for driving without a seatbelt = $220 \times 0.9 = 198$
Fine for driving without seatbelt = Rs. $(X + 500)$
So,
 $\Rightarrow 198 \times (X + 500) - 220X = 77000$
 $\Rightarrow 22X = 22000$
 $\Rightarrow X = \text{Rs.} 1000$
Hence, the fine for driving without a seatbelt earlier = Rs. 1000

Q:52 The correct answer is **Option 1 i.e. Rs. 2.28 lakhs.**

From the table:
Number of people who are fined for Driving without insurance in Hyderabad = 380
So,
Number of people in Hyderabad who are fined for Riding without Helmet = $380 \times 0.75 = 285$
Since the fine for Riding without a Helmet is Rs. 800.
So,
Total amount = $800 \times 285 = \text{Rs.} 228000$

Q:53 The correct answer is **Option 3 i.e. 165.**

From the table:

The number of people who are fined for Driving without a seatbelt in Bengaluru = 220

The number of people who are fined for Driving without a seatbelt in Hyderabad = 245

So,

Number of males who are fined for Driving without a seatbelt in Bengaluru = $220 \times 7/11 = 140$

Number of females who are fined for Driving without a seatbelt in Bengaluru = $220 \times 4/11 = 80$

And,

Number of males who are fined for Driving without a seatbelt in Hyderabad = $245 \times 5/7 = 175$

Number of females who are fined for Driving without a seatbelt in Hyderabad = $245 \times 2/7 = 70$

Hence,

Required difference = $(140 + 175) - (80 + 70) = 315 - 150 = 165$

Q:54 The correct answer is **Option 2 i.e. Rs. 2052500.**

The total amount collected from both cities for Drink and driving

$$\Rightarrow 2500 \times 320 + 3000 \times 285$$

$$\Rightarrow 800000 + 855000 = \text{Rs.} 1655000$$

And,

The total amount collected from both cities for Driving without insurance

$$\Rightarrow 500 \times (415 + 380)$$

$$\Rightarrow 500 \times 795 = \text{Rs.} 397500$$

Hence, total amount = $1655000 + 397500 = \text{Rs.} 2052500$

Q:55 The correct answer is **Option 4 i.e. 58.8%.**

The total number of people who are fined for Driving without a license in both cities

$$\Rightarrow [250 + 290] = 540$$

The total number of people who are fined for Overspeed in both cities = $[175 + 165] = 340$

Hence, Required percentage = $[(540 - 340)/340] \times 100 = 58.8\%$

Q:56 The correct answer is **Option 1 i.e. 72.**

From the table:

Total phones serviced in the month of June and July together = $116 + 134 + 102 + 158 + 129 + 143 + 65 + 153 = 1000$

Total phones serviced in the month of May and August together = $120 + 137 + 143 + 135 + 145 + 128 + 118 + 146 = 1072$

Hence, difference = $1072 - 1000 = 72$

Q:57 The correct answer is **Option 4 i.e. 210.**

From the table:

The total number of phones serviced by centres B and C together in May = $137 + 143 = 280$

Since 25% were done for female customers that means 75% were male.

Hence,

Total number of phones serviced by center B & C together in May for male customers
= $280 \times 0.75 = 210$

Q:58 The correct answer is **Option 4 i.e. 3.65 lakhs.**

From the table:

Total no. of phones serviced by center D in August = 146

Hence,

Total amount collected = $146 \times 2500 = \text{Rs.} 365000$ or $\text{Rs.} 3.65$ lakhs

Q:59 The correct answer is **Option 2 i.e. 81 : 62.**

From the table:

Total phones serviced by centre B in June, July and August = $134 + 143 + 128 = 405$

Total phones serviced by centre C in May, June and July = $143 + 102 + 65 = 310$

Hence,

Ratio = $405 : 310 = 81 : 62$

Q:60 The correct answer is **Option 3 i.e. 94.7%.**

From the table:

Total phones serviced by service centres A and B in the month of June = $116 + 134 = 250$

Total phones serviced by service centres C and D in the month of August = $118 + 146 = 264$

Hence,

Required percentage = $[250/264] \times 100 = 94.7\%$

Q:61 The correct answer is **Option 1 i.e. \$88,440.**

Revenue on movie

Raging Bull = $2,107,600 = \$28,543$

Singing In The Rain = $3,584,401 = \$48,543$

The Godfather = $838,400 = \$11,354$

Total = $28,543 + 48,543 + 11,354$

= $\$88,440$

Q:62 The correct answer is **Option 4 i.e. 81.8%.**

Budget of the movie Singing In The Rain = 35K = $2,584,400$

So profit = $3,584,401 - 2,584,400 = 1,000,001$

Budget of the movie Casablanca = 25K = $1,846,000$

So profit = $2,846,001 - 1,846,000 = 1,000,001$

Here total profit = $2,000,002$

Budget of the movie Raging Bull = 15K = $1,107,600$

So profit = $2,107,600 - 1,107,600 = 1,000,000$

Budget of the movie The Godfather = 10K = $738,400$

So profit = $838,400 - 738,400 = 1,00,000$

Here total profit = $1,100,000$

Required Percentage

= $(2,000,002 - 1,100,000)/1100,000 \times 100 = 81.8\%$

Q:63 The correct answer is **Option 4 i.e. 1,846,000.**

Maximum budget

On the movie Singing in the Rain = 35K

Minimum budget

On movies The Godfather = 10K

Difference = $35K - 10K = 25K$

In rupees

= $25000 \times 73.84 = 1,846,000$

Q:64 The correct answer is **Option 3 i.e. 68%.**
 Budget of movie Lawrence of Arabia = 20K = Rs. 1,476,800
 Revenue on the movie Lawrence of Arabia = Rs. 2,476,801
 Required profit = 2,476,801 – 1476800 = Rs. 1000001
 percentage = $1000001/1476800 \times 100 = 67.71 = 68\%$

Q:65 The correct answer is **Option 2 i.e. Rs. 7,00,000.**
 Budget(\$) of 3 movies
 The Godfather - 10K
 Singing In the Rain - 35K
 Raging Bull - 15K
 So, the total, 60K = Rs. 4,430,400
 The total revenue
 $= 838,400 + 3,584,401 + 2,107,600 = \text{Rs. } 65,30,401$
 Average profit
 $= (65,30,401 - 4,430,400)/3 = 2,100,001/3$
 $= \text{Rs. } 7,00,000 \text{ (approx.)}$

Q:66 The correct answer is **Option 4 i.e. 466361.**
 Average = sum of observations/number of observations
 $\Rightarrow (550000 + 645200 + 425200 + 568500 + 365210 + 125400 + 362150 + 689230)/8$
 $\Rightarrow 3730890/8 = 466361.25 = 466361 \text{ (approx.)}$

Q:67 The correct answer is **Option 4 i.e. 265498.**
 The male account holders of the bank in 2017 = 57% of 550000 = 313500
 The male account holders of the bank in 2018 = 46% of 645200 = 296792
 The male account holders of the bank in 2019 = 22% of 425200 = 93544
 The male account holders of the bank in 2020 = 63% of 568500 = 358155
 Average = Sum of observations/number of observations
 $\Rightarrow (313500 + 296792 + 93544 + 358155)/4$
 $\Rightarrow 1061991/4 = 265497.75 = 265498 \text{ (approx.)}$

Q:68 The correct answer is **Option 3 i.e. 8850.**
 In 2017,
 Credit card users = 555
 Debit card users = 3652
 Total card users = 4207
 and, in 2022,
 Credit card users = 2321
 Debit card users = 2322
 Total card users = 4643
 Hence, the total card users = 8850

Q:69 The correct answer is **Option 2 i.e. 2242.**
 Average = Sum of observations/number of observations
 $\Rightarrow (1452 + 625 + 2156 + 1120 + 2321 + 4455 + 3562)/7$
 $\Rightarrow 15691/7 = 2241.57 = 2242 \text{ (approx.)}$

Q:70 The correct answer is **Option 1 i.e. 228527.**
 Total female account holders in 2018 = 54% of 645200 = 348408
 and, Total female account holders in 2023 = 30% of 362150 = 108645
 Hence, Average = $457053/2 = 228526.5 = 228527 \text{ (approx.)}$

Q:71 The Correct Answer is **option 1 i.e. 16.2%.**
 Percentage of students scoring more than 80% in school A = $100 - (28 + 63) = 9\%$
 9% of Total strength of school A = 162
 Total strength of school A = 1800
 Boys in school A = $7/12 \times 1800 = 1050$
 Percentage of students scoring more than 80% in school D = $100 - (12 + 64) = 24\%$
 24% of Total strength of school D = 396
 Total strength of school D = 1650
 Girls in school D = $(8/15) \times 1650 = 880$
 Required percentage = $[(1050 - 880)/1050] \times 100 = 16.2\%$

Q:72 The Correct Answer is **option 2 i.e. 17%.**
 $(100 - 14 - 73)\% \text{ of Total students in B} = 195$
 Student in school B = $195/0.13 = 1500$
 Students failed in B = 14% of 1500 = 210
 $(100 - 21 - 57)\% \text{ of students in C} = 242$
 Students in C = $242/0.22 = 1100$
 Students failed in C = 21% of 1100 = 231
 Required percentage = $[(231 + 210)/(1500 + 1100)] \times 100 = 16.96 \sim 17\%$

Q:73 The correct answer is **option 1 i.e. 404 : 603.**
 Percentage of students scoring more than 80% in school D = $100 - (12 + 64) = 24\%$
 Total students in school D = 24% of Total strength = 396
 Total strength in school D = 1650
 Students scoring less than 40% = 12% of 1650 = 198
 Similarly,
 Total students in school E = $315/0.14 = 2250$
 Students scoring less than 40% in school E = 18% of 2250 = 405
 Required ratio = $(162 + 242)/(405 + 198) = 404 : 603$

Q:74 The correct Answer is **option 4 i.e. 766.**
 Percentage of students scoring more than 80% in school A = $100 - (28 + 63) = 9\%$
 Total students in school A = 9% of Total strength = 162
 Total students in school A = 1800
 Girls in school A = $(5/12) \times 1800 = 750$
 Similarly,
 Total students in school B = 13% of total strength = 195
 Students in school B = $195/0.13 = 1500$
 Girls in school B = $(2/5) \times 1500 = 600$
 Total students in school in C = 22% of total strength = 242
 Total students in school C = $242/0.22 = 1100$
 Girls in school C = $(6/11) \times 100 = 600$
 Total students in school D = 24% of Total strength = 396
 Total students in school D = $396/0.24 = 1650$
 Girls in school D = $(8/15) \times 1650 = 880$
 Total students in school E = 14% of total strength = 315
 Total students in school E = $315/0.14 = 2250$
 Girls in school E = $(4/9) \times 2250 = 1000$
 Required average = $(1000 + 880 + 600 + 600 + 750)/5 = 3830/5 = 766$

Q:75 The correct answer is **option 2 i.e. 498.**

(100 - 21 - 57)% of students in C = 242

Students in school C = 22% of C = $242/0.22 = 1100$

Number of girls in school C = $(6/11) \times 1100 = 600$

Number of boys in school C = $1100 - 600 = 500$

Number of girls scoring more than 80% = 40% of 600 = 240

Number of boys scoring more than 80% = $242 - 240 = 2$

Number of boys scoring less than 80% = $500 - 2 = 498$

Q:76 The correct answer is **Option 4 i.e. 35%.**

The number of female students in class other than 10th in school C = 101

And

From the table:

The number of female students in class 10 in school C = 25

Hence,

Total = $101 + 25 = 126$

Now,

Required percentage

$\Rightarrow (126/360) \times 100$

$\Rightarrow 35\%$

Q:77 The correct answer is **Option 1 i.e. 18.**

From the table:

Number of male students in class 10 of School A = $48 - 12 = 36$

Number of male students in class 10 of School B = $64 - 10 = 54$

Hence,

$\Rightarrow 54 - 36$

$\Rightarrow 18$

Q:78 The correct answer is **Option 3 i.e. 1 : 6.**

From the table:

Total number of students (Male + Female) in class 10th of School C = 80

Total number of students (Male + Female) in all the classes together in School B = 480

Hence,

Required ratio

$\Rightarrow 80 : 480$

$\Rightarrow 1 : 6$

Q:79 The correct answer is **Option 2 i.e. 330.**

The ratio of the number of students in class 8 to that of class 9 in School A and B together = 55 : 48 (Let $55x$ & $48x$)

Total number of students other than class 10 in School

A and B together = $(250 - 48) + (480 - 64)$

= $202 + 416$

= 618

So,

$55x + 48x = 618$

$103x = 618$

$x = 6$

Hence,

The total number of students in standard 8 in School A and B together = $55x$

= 330

Q:80 The correct answer is **Option 4 i.e. 74.4%**

From the table:

Total number of students in Class 10 of School B = 64

The total number of students in School A = 250

Hence,

$\Rightarrow [(250 - 64)/250] \times 100$

$\Rightarrow 186/250 \times 100 = 74.4\%$

Q:81 The correct answer is **Option 4 i.e. Rs.35150.**

Amount invested by Rajeev in TATA Steel = Rs.24500

Amount invested by Rajeev in TATA Motors = Rs.45800

Total amount = $(24500 + 45800)/2 = 70300/2 =$ Rs.35150

Q:82 The correct answer is **Option 3 i.e. 49.79%.**

Total amount invested by Pratiksha = $(15890 + 25560 + 15870) = 57320$

Total amount invested by Chaman = $(78500 + 15620 + 20050) = 114170$

Difference = $114170 - 57320 = 56850$

Percentage = $(56850/114170) \times 100 = 0.4979 \times 100 = 49.79\%$

Q:83 The correct answer is **Option 2 i.e. Rs. 34090.**

The amount invested by Pratiksha in TATA Steel = Rs.15890

The amount invested by Pratiksha in TATA Power = Rs. 15870

Total amount = $15890 + 15870 = \text{Rs. } 31760$

The amount invested by Chaman in TATA Power = Rs.20050

The amount invested by Rajeev in TATA Motors = Rs.45800

Total amount = $20050 + 45800 = \text{Rs. } 65850$

Required difference = $65850 - 31760 = \text{Rs. } 34090$

Q:84 The correct answer is **Option 1 i.e. Rs. 5038.9.**

The amount invested by Pratiksha in TATA Steel = Rs.15890

The amount invested by Kiara = 15% of 15890 = Rs.2383.5

The amount invested by Chaman in TATA Motors = 15620

The amount invested by Kiara = 17% of 15620 = Rs.2655.4

The total amount invested by Kiara = $2383.5 + 2655.4 = \text{Rs. } 5038.9$

Q:85 The correct answer is **Option 2 i.e. Rs. 6948.75.**

The amount invested by Chaman in TATA Steel = Rs. 78500

S.I. = $(P \times R \times T)/100$

Here, P = 25% of 78500 = Rs.19625

$\Rightarrow S.I. = (19625 \times 5 \times 3)/100$

$\Rightarrow S.I. = 294375/100$

$\Rightarrow S.I. = \text{Rs. } 2943.75$

Amount = Principal + Interest

Amount = $19625 + 2943.75 = \text{Rs. } 22568.75$

Amount invested by Chaman in TATA Motors = Rs.15620

Required difference = $22568.75 - 15620 = \text{Rs. } 6948.75$

Q:86 The correct answer is **option 1** i.e. **31 : 75**.
 Average spend = 278000
 Total spend of CEO = Average spend \times 5 = 278000×5
 $= 1390000$
 Minimum spend of CEO = 75000
 Let the spend in London is x rupees
 $75000 + 125000 + x + 120000 + 980000 = 1390000$
 $X = 1390000 - 1300000 = 90000$
 Ratio of CEO's spend in London and Manager's spend in New York = 90 : 31
 Let the ratio is 90x : 31x
 $\Rightarrow 90x = 90000$
 $\Rightarrow x = 1000$
 $\Rightarrow 31x = 31000$
 Minimum spend of CEO is 75000
 Managers spend in New York is 31000.
 The ratio of the Manager's spend in New York and CEO's minimum spend = $31000 : 75000 = 31 : 75$

Q:87 The correct answer is **option 3** i.e. **26000**.
 200% more mean he spends 300% of HR's Philippines spend on his London visit.
 Average = Sum of all spend / 5
 HR spend in Philippines = 7000
 Manages' London spend = 300% of HR's Philippines spend
 $= (300/100) \times 7000 = 21000$
 Manager's New York spend = 31000
 Manager's USA spend = 36000
 Manager's London spend = 21000
 Manager's Philippines spend = 27000
 Manager's New Zealand spend = 15000
 Total spend = $31000 + 36000 + 21000 + 27000 + 15000 = 130000$
 Average spend = $(130000)/5 = 26000$

Q:88 The correct answer is option 4 i.e. 41900.
 First, find the average spend of all employees then divide by 20 or find the average of one employee spend
 Total spend of all employees = $170000 + 2500000 + 600000 + 120000 + 800000 = 4190000$
 The average spend of all employees in all visit = $4190000/5 = 838000$
 Average spending of one employee = Average spend of all employees / Number of employees
 $= 838000 / 20 = 41900$

Q:89 The correct answer is **option 1** i.e. **3752 : 3470**.
 Total spend in New Zealand = $980000 + 15000 + 51000 + 30000 + 800000 = 1876000$
 Average spend in New Zealand = 375200
 Total spend in USA = $125000 + 36000 + 10000 + 32000 + 2500000 = 2703000$
 Total spend in London = $90000 + 21000 + 34000 + 22000 + 600000 = 767000$
 Sum of USA spend and London spend = $2703000 + 767000 = 3470000$
 The ratio of average spend in New Zealand and the sum of USA and London spend = $375200 : 3470000 = 3752 : 3470$

Q:90 The correct answer is **option 3** i.e. **77.67%**.
 Total spend by Team Head = $70000 + 32000 + 22000 + 45000 + 30000 = 199000$
 Average spend by Team Head = $199000 / 5 = 39800$
 Total spend by HR = $10000 + 10000 + 34000 + 7000 + 51000 = 112000$
 Average spend of HR = $112000 / 5 = 22400$
 Difference = $39800 - 22400 = 17400$
 Percentage = $(17400 / 22400) \times 100 = 77.67\%$

Q:91 The correct answer is **Option 4** i.e. **11.11%**.
 The number of bronze medals won in 2015 = $\{5/(2 + 3 + 5)\} \times 500 = (5/10) \times 500 = 250$
 The total number of medals won in all the years combined = $500 + 450 + 600 + 400 + 300 = 2250$
 Required Percentage = $(250/2250) \times 100 = 11.11\%$

Q:92 The correct answer is **Option 4** i.e. **244.4**.
 Number of Female medalists in 2017 = 60% of 450 = $(60/100) \times 450 = 270$
 Number of silver medals won in 2021 = $\{5/(2 + 5 + 1)\} \times 400 = (5/8) \times 400 = 250$
 Sum = $270 + 250 = 520$
 Hence, 47% of 520 = $(47/100) \times 520 = 244.4$

Q:93 The correct answer is **Option 3** i.e. **837**.
 The total number of silver medals won in all the years combined
 $= \{(3/10) \times 500\} + \{(5/15) \times 450\} + \{(5/12) \times 600\} + \{(5/8) \times 400\} + \{(2/6) \times 300\}$
 $= 150 + 150 + 250 + 250 + 100 = 900$
 $= 93\% \text{ of } 900$
 $= (93/100) \times 900 = 837$

Q:94 The correct answer is **Option 1** i.e. **172**.
 The total number of bronze medals won in all the years combined
 $= \{(5/10) \times 500\} + \{(7/15) \times 450\} + \{(4/12) \times 600\} + \{(1/8) \times 400\} + \{(3/6) \times 300\}$
 $= 250 + 210 + 200 + 50 + 150 = 860$
 Average = $860/5 = 172$

Q:95 The correct answer is **Option 3** i.e. **431 : 694**.
 Total number of male medalists in all the years combined
 $= (45\% \text{ of } 500) + (40\% \text{ of } 450) + (35\% \text{ of } 600) + (43\% \text{ of } 400) + (25\% \text{ of } 300)$
 $= 225 + 180 + 210 + 172 + 75 = 862$.
 Total number of female medalists in all the years combined
 $= (55\% \text{ of } 500) + (60\% \text{ of } 450) + (65\% \text{ of } 600) + (57\% \text{ of } 400) + (75\% \text{ of } 300)$
 $= 275 + 270 + 390 + 228 + 225 = 1388$.
 Ratio = $862/1388$
 $= 431 : 694$

Q:96 The correct answer is **Option 4** i.e. **12**.
 Total number of runs scored by Dhoni = $800 \times 114/100 = 912$
 Now,
 Number of matches played by Dhoni = $912/76 = 12$
 Hence, total matches = 12

Q:97 The correct answer is **Option 4 i.e. 1200.**

Let the total number of balls faced by Virat is x
So,

$$120/100 \times x/2 + 150/100 \times x/2 = 20 \times 81$$

$$54x/40 = 1620$$

$$\text{Hence, } x = 1200$$

Q:98 The correct answer is **Option 3 i.e. 40.5 .**

Let the total runs scored by Shikhar is x

So,

Total balls faced by Shikhar = $x - 74$

According to question,

$$100x/(x - 74) = 129.6$$

$$x = 324$$

$$\text{Hence, average} = 324/8 = 40.5$$

Q:99 The correct answer is **Option 2 i.e. 474.**

Total runs scored = No. of matches \times Averages runs

$$= 56 \times 110$$

$$= 6160$$

Now

Total runs scored (excluding last 3 match) = 53×101

$$= 5353$$

Total runs in last 3 matches = $6160 - 5353$

$$= 807$$

Hence,

In 54th and 55th matches runs are below 168 and more than 165 and no two scores among these 3 scores are equal. So assume 54th = 166 and 55th = 167

So, run in 56th match

$$= 807 - (166 + 167)$$

$$= 474$$

Q:100 The correct answer is **Option 1 i.e. 200/9%.**

Total runs scored by Ajinkya = $66 \times 4x/100 = 264x/100$

&,

Total runs scored by Hardik = $72 \times 3x/100 = 216x/100$

Hence, percent = $48x/100 \times 100/216x \times 100$

$$= 48/216 \times 100$$

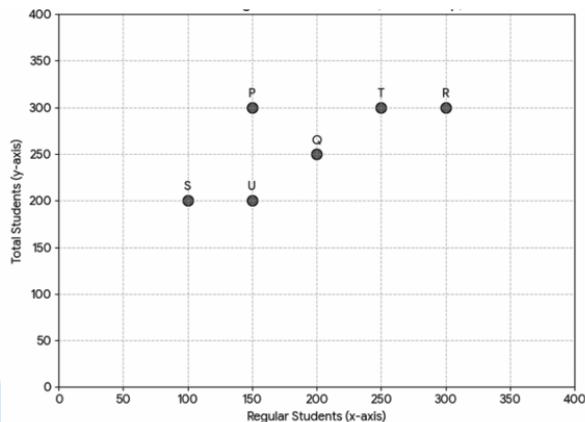
$$= 200/9\%$$



SCATTER PLOT

Directions (1-5): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of students attending regular classes and the y-axis represents the total number of students enrolled (regular + non-regular) in six coaching institutes P, Q, R, S, T and U.



Q:1 Find the average number of regular students in the institutes where the number of non-regular students is less than 60?

- 1. 225
- 2. 200
- 3. 190
- 4. 250

Q:2 If 40 non-regular students of Institute P are shifted to Institute Q and become regular students there, find the new difference between the number of regular students in Q and P?

- 1. 70
- 2. 100
- 3. 90
- 4. 50

Q:3 If Institutes Q, S and U together form a group, find the ratio of total regular students to total students in the group?

- 1. 7 : 1
- 2. 9 : 13
- 3. 9 : 11
- 4. 11 : 13

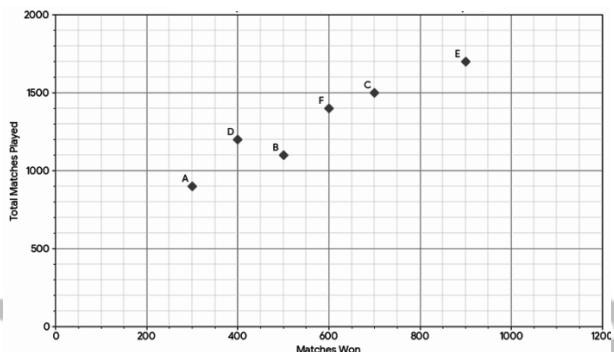
Q:4 If x non-regular students move from Institute P to Institute S such that the number of non-regular students in both institutes becomes equal, find x?

- 1. 10
- 2. 20
- 3. 25
- 4. 30

Q:5 By how much percentage is the number of regular students in Institute T more than the average number of regular students of Institutes P and S?

- 1. 100%
- 2. 300%
- 3. 200%
- 4. 400%

Directions (6-10): Study the following information carefully and answer the questions given below. The following scatter graph depicts two axes, x-axis and y-axis. Here, the x-axis represents the number of matches won and the y-axis represents the total number of matches played (won + lost) by six teams A, B, C, D, E and F.



Q:6 Compare the total number of matches won by all the teams with the total number of matches lost by all the teams. The total wins are approximately how much percent less or more than the total losses?

- 1. 39.7%
- 2. 22.7%
- 3. 10.7%
- 4. 52.7%

Q:7 Out of the total matches of team E, 30% of wins and 40% of losses were played at the home ground. Out of the total matches of team B, 25% of wins and 20% of losses were played at away venues. Find the combined number of such matches?

- 1. 550
- 2. 450
- 3. 835
- 4. 880

Q:8 What is the ratio of total matches won by teams B, D and F together to the total matches lost by the same teams?

- 1. 10 : 21
- 2. 13 : 21
- 3. 1 : 2
- 4. 15 : 22

Q:9 Find the difference between the total matches lost by teams A, C, E and F together and the total matches lost by the remaining teams?

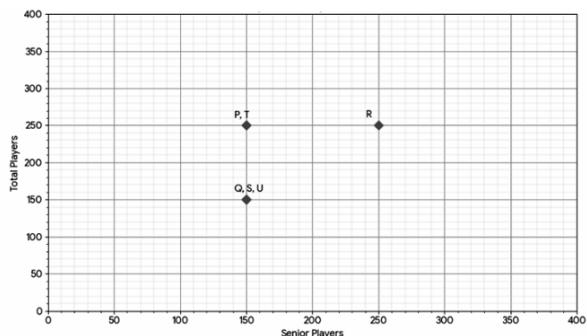
- 1. 1130
- 2. 670
- 3. 1600
- 4. 1200

Q:10 In team C, each win awards 20 points and each loss awards 10 points. In team D, points per win are increased by 25% and points per loss are reduced by 20% compared to team C. Find the difference between the total points obtained by team D from wins and losses?

- 1. 4000
- 2. 3600
- 3. 3000
- 4. 2800

Directions (11-15): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the total number of players and the y-axis represents the total number of senior players by six teams P, Q, R, S, T and U.



Q:11 If 20% of the junior players of Team P are converted into senior players and 10% senior players of Team T leave the team, find the new difference in senior players between P and T?

- 1. 35
- 2. 25
- 3. 20
- 4. 22

Q:12 If teams Q, S, and U form a combined squad, what percentage of the total players of this squad are senior players?

- 1. 90%
- 2. 200%
- 3. 100%
- 4. 500%

Q:13 If Team R transfers 20% of its senior players equally to Teams P and T, find the new ratio of senior players in Teams P, R, and T?

- 1. 7 : 3 : 2
- 2. 7 : 4 : 5
- 3. 2 : 3 : 5
- 4. 7 : 8 : 7

Q:14 If the total players of Team T are reduced so that the ratio of senior to total players becomes the same as that of Team P, find the new total players of Team T?

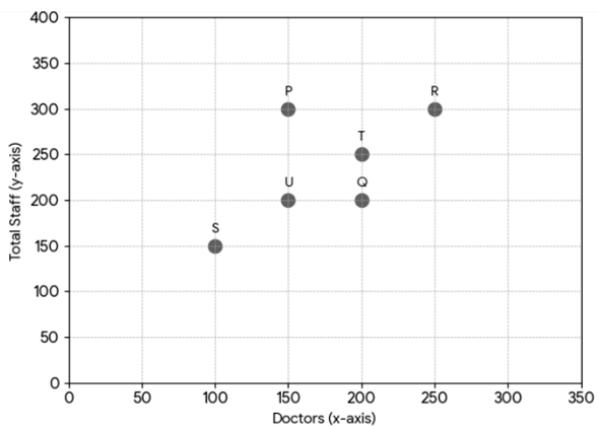
- 1. 90
- 2. 50
- 3. 250
- 4. 200

Q:15 If the number of senior players in Team P is increased by x and the number of senior players in Team R is decreased by the same x such that both become equal, find x ?

- 1. 80
- 2. 150
- 3. 180
- 4. 50

Directions (16-20): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of doctors and the y-axis represents the total staff (doctors + non-doctors) in six hospitals P, Q, R, S, T and U.



Q:16 Find the average number of doctors in the hospitals, which have more than 200 total staff?

- 1. 200
- 2. 150
- 3. 180
- 4. 90

Q:17 If 20% of the non-doctor staff of Hospital P are converted into doctors and 10 doctors leave Hospital R, find the new difference between doctors of P and R?

- 1. 25
- 2. 40
- 3. 60
- 4. 80

Q:18 If Hospitals S and U are merged, find the ratio of doctors to non-doctor staff in the merged hospital?

- 1. 4 : 9
- 2. 5 : 2
- 3. 5 : 3
- 4. 3 : 2

Q:19 If Hospital T reduces its total staff so that the ratio of doctors to total staff becomes the same as that of Hospital R, find the new total staff of Hospital T?

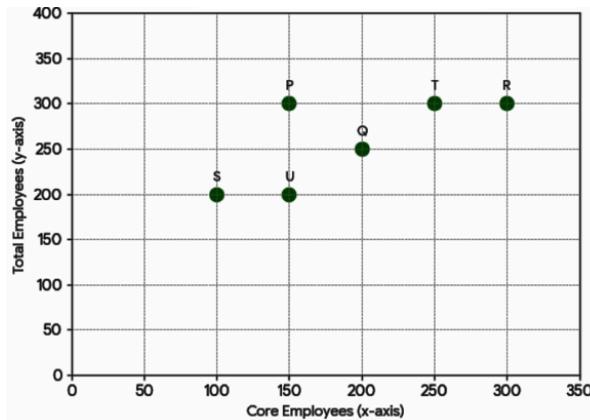
- 1. 90
- 2. 350
- 3. 240
- 4. 180

Q:20 If Hospitals P, T and U form a group, what percentage of the total staff in the group are non-doctor staff?

- 1. 30%
- 2. $33\frac{1}{3}\%$
- 3. 50%
- 4. 25%

Directions (21-25): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of employees working in core departments and the y-axis represents the total number of employees (core + support staff) in six companies P, Q, R, S, T and U.



Q:21 Find the average number of support staff in the companies having more than 200 total employees?

- 1. 50
- 2. 62.5
- 3. 70
- 4. 80

Q:22 If 30% of the support staff of Company P are converted into core employees, find the new difference between core employees and support staff in Company P?

- 1. 50
- 2. 100
- 3. 90
- 4. 80

Q:23 If Companies S and U merge together to form a new company, what percentage of the total employees in the new company are core employees?

- 1. 72.5%
- 2. 62.5%
- 3. 50%
- 4. 20%

Q:24 If x core employees are transferred from Company R to Company S, such that both companies have equal number of core employees, find x ?

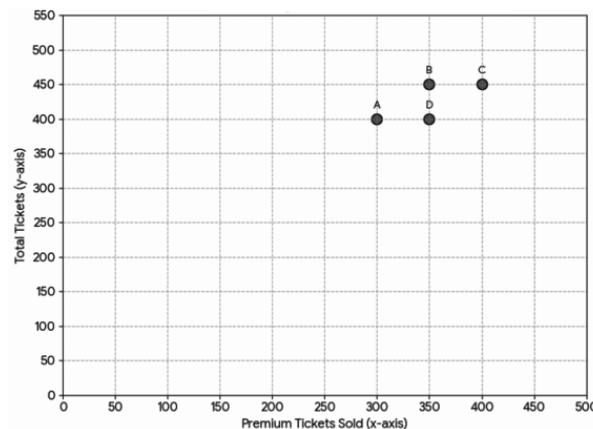
- 1. 90
- 2. 70
- 3. 100
- 4. 150

Q:25 If Companies P, Q and T together form a group, find the ratio of total support staff to total core employees in the group?

- 1. 3 : 2
- 2. 5 : 12
- 3. 2 : 1
- 4. 4 : 1

Directions (26-30): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of premium tickets sold and the y-axis represents the total number of tickets available (premium + regular) in four cinema halls A, B, C and D.



Q:26 Find the ratio of premium tickets sold to regular tickets in Cinema Hall B and Cinema Hall D taken together?

- 1. 1 : 3
- 2. 14 : 3
- 3. 4 : 1
- 4. 5 : 3

Q:27 By what percentage is the number of premium tickets sold in Cinema Hall C more than the average number of premium tickets sold in Cinema Halls A and D?

- 1. 50%
- 2. 20%
- 3. 23.08%
- 4. 33.08%

Q:28 Find the average number of regular tickets across all four cinema halls?

- 1. 90
- 2. 100
- 3. 60
- 4. 75

Q:29 If 50 premium tickets of Cinema Hall C are converted into regular tickets, find the new difference between premium and regular tickets in Cinema Hall C?

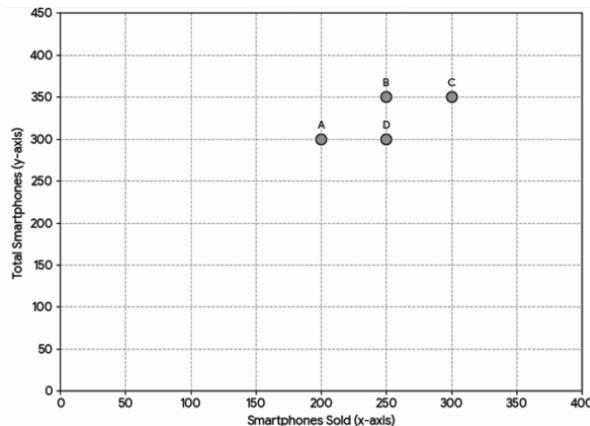
- 1. 250
- 2. 280
- 3. 300
- 4. 350

Q:30 What is the difference between the total number of tickets in Cinema Halls B and C together and the total number of tickets in Cinema Halls A and D together?

- 1. 100
- 2. 280
- 3. 300
- 4. 350

Directions (31-35): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of smartphones sold and the y-axis represents the total number of smartphones available (sold + unsold) in four mobile outlets A, B, C and D.



Q:31 Find the ratio of non-sold smartphones in Outlet A to non-sold smartphones in Outlet C?

- 1. 2 : 5
- 2. 2 : 3
- 3. 2 : 1
- 4. 3 : 1

Q:32 What percentage of total smartphones are sold in Outlet B?

- 1. 13%
- 2. 45%
- 3. 71.43%
- 4. 79%

Q:33 Find the average number of smartphones sold by all four outlets?

- 1. 170
- 2. 250
- 3. 350
- 4. 450

Q:34 By how many smartphones is the number of smartphones sold in Outlet C more than that sold in Outlet A?

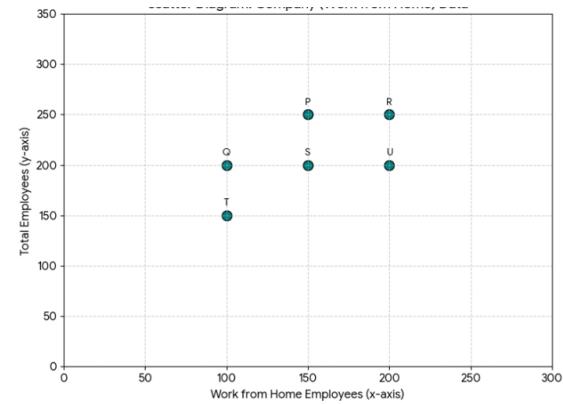
- 1. 90
- 2. 100
- 3. 150
- 4. 300

Q:35 If 50 non-sold smartphones of Outlet B are sold later, what will be the new number of non-sold smartphones in Outlet B?

- 1. 20
- 2. 10
- 3. 15
- 4. 50

Directions (36-40): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of employees working from home and the y-axis represents the total number of employees (work from home + office) in six companies P, Q, R, S, T and U.



Q:36 If Companies Q, S and T are taken together, find the ratio of total work from home employees to total work from office employees in the group?

- 1. 3 : 2
- 2. 7 : 4
- 3. 3 : 5
- 4. 7 : 9

Q:37 Find the average number of work from office employees in the companies where the number of work from home employees is at least 150?

- 1. 10
- 2. 20
- 3. 50
- 4. 40

Q:38 If x work from home employees are transferred from Company R to Company T such that both companies have equal number of work from home employees, find x?

- 1. 20
- 2. 30
- 3. 40
- 4. 50

Q:39 If 20 work from home employees of Company P shift to office work and 10 office employees of Company R start working from home, find the new difference between work from home employees of P and R?

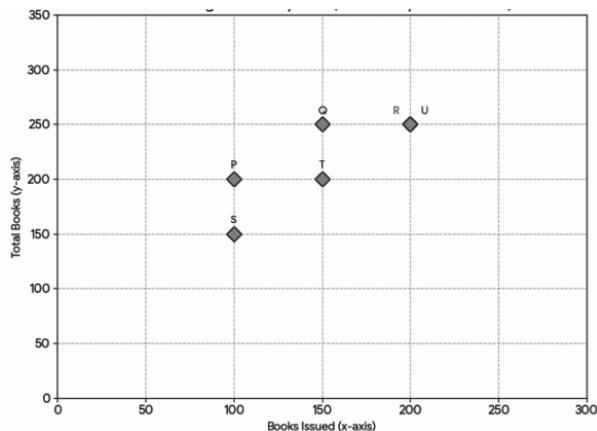
- 1. 120
- 2. 80
- 3. 100
- 4. 60

Q:40 By what percentage is the number of work from home employees in Company U less than the average number of work from home employees of Companies P and R?

- 1. 20%
- 2. 25%
- 3. 33%
- 4. 14.29%

Directions (41-45): The following scatter graph depicts two axes, x-axis and y-axis.

Here, the x-axis represents the number of books issued and the y-axis represents the total number of books available (issued + not issued) in six libraries P, Q, R, S, T and U.



Q:41 Find the average number of issued books in those libraries where the number of not issued books is at least 50 but less than 100?

- 1. 100
- 2. 162.5
- 3. 146
- 4. 120

Q:42 If Libraries Q, R and T are grouped together, find the ratio of total issued books to total not issued books in the group?

- 1. 5 : 2
- 2. 5 : 3
- 3. 3 : 2
- 4. 5 : 9

Q:43 If 25 not issued books from Library Q are issued and 25 issued books from Library U become not issued, find the new difference between issued books of Q and U?

- 1. 10
- 2. 0
- 3. 30
- 4. 5

Q:44 By how many books is the total number of not issued books in Libraries P and Q more than the total number of not issued books in Libraries R, S and T?

- 1. 10
- 2. 20
- 3. 70
- 4. 50

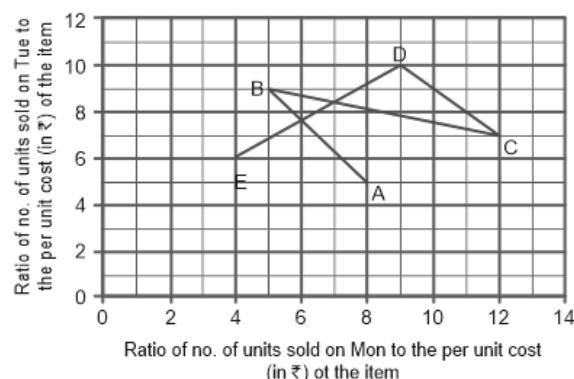
Q:45 What percentage of the total issued books of all six libraries is contributed by the average issued books of Libraries R and U?

- 1. 66.6%
- 2. 22.22%
- 3. 33.33%
- 4. 44.44%

Directions (46-50): Study the following data carefully and answer the questions:

A shopkeeper sold different units of five different items (A, B, C, D, and E) on two different days, Monday and Tuesday. The scatter graph given below shows the ratio of the number of units sold on Monday to the per unit cost of each item, and the ratio of the number of units sold on Tuesday to the per unit cost of each item.

The data given below is related to the number of units of all 5 items sold on Tuesday.



The ratio of the number of sold units of item A to that of item D is 4 : 7, and the ratio of the number of sold units of item B to that of item E is 5 : 4. The number of sold units of item C is 7 more than that of item D. The number of sold units of item D is 38 less than that of item E, and the number of sold units of item A is 95 less than that of item B.

Q:46 Find the difference between the sum of the units sold of items D and E which sold on Tuesday and the sum of the units sold of items A and C which sold on Monday.

- 1. 22
- 2. 13
- 3. 18
- 4. 17

Q:47 Find the ratio of the total units sold of items D and E together on Monday to the total units sold of items B and E together on Tuesday.

- 1. 15 : 26
- 2. 3 : 7
- 3. 9 : 16
- 4. 5 : 9

Q:48 The total amount received by selling all the given units of item D on Tuesday is what percent more or less than that received by selling all the given units of item A on Tuesday?

- 1. $53\frac{1}{8}\%$
- 2. $43\frac{1}{8}\%$
- 3. $63\frac{1}{8}\%$
- 4. $33\frac{1}{8}\%$

Q:49 Which of the following is/are not true?

- A: The ratio of the number of sold units of item A on Monday to that of item E on Monday is 16:17.
- B: The average per unit cost of items C, D, and E is ₹10.
- C: The total amount received by selling all the given units of item E on Tuesday is ₹1934.
- 1. Only A and B
- 2. Only C
- 3. None is true
- 4. Only B and C

Q:50 Find the total amount received by the shopkeeper on Monday by selling the given units of items B, C, and D.

- 1. ₹3218
- 2. ₹3018
- 3. ₹3518
- 4. ₹3618

Answer Key

| | | | | |
|---------|---------|---------|---------|---------|
| 1. (1) | 2. (3) | 3. (2) | 4. (3) | 5. (1) |
| 6. (2) | 7. (3) | 8. (4) | 9. (3) | 10. (2) |
| 11. (1) | 12. (3) | 13. (4) | 14. (3) | 15. (4) |
| 16. (1) | 17. (3) | 18. (2) | 19. (3) | 20. (2) |
| 21. (2) | 22. (3) | 23. (2) | 24. (3) | 25. (2) |
| 26. (2) | 27. (3) | 28. (4) | 29. (1) | 30. (1) |
| 31. (3) | 32. (3) | 33. (2) | 34. (2) | 35. (4) |
| 36. (2) | 37. (3) | 38. (4) | 39. (2) | 40. (4) |
| 41. (2) | 42. (1) | 43. (2) | 44. (4) | 45. (2) |
| 46. (3) | 47. (4) | 48. (1) | 49. (3) | 50. (2) |

Answers and Solutions

Q:1 The correct answer is **option 1 i.e. 225**

| Institute | Regular Students | Total Students | Non-Regular Students |
|-----------|------------------|----------------|----------------------|
| P | 150 | 300 | 150 |
| Q | 200 | 250 | 50 |
| R | 300 | 300 | 0 |
| S | 100 | 200 | 100 |
| T | 250 | 300 | 50 |
| U | 150 | 200 | 50 |

Non-regular < 60 → Q (50), R (0), T (50), U (50)

Regular students = $200 + 300 + 250 + 150 = 900$

Average = $900 \div 4 = 225$

Q:2 The correct answer is **option 3 i.e. 90**

P regular = 150, Q regular = 200

After transfer → P regular = 150, Q regular = 240

Difference = $240 - 150 = 90$

Q:3 The correct answer is **option 2 i.e. 9 : 13**

Regular students = $200 + 100 + 150 = 450$

Total students = $250 + 200 + 200 = 650$

Ratio = $450 : 650 = 9 : 13$

Q:4 The correct answer is **option 3 i.e. 25**

Non-regular in P = 150, in S = 100

$$150 - x = 100 + x$$

$$2x = 50$$

$$x = 25$$

Q:5 The correct answer is **option 1 i.e. 100%**

Average regular of P and S = $(150 + 100) \div 2 = 125$

Excess = $250 - 125 = 125$

Percentage increase = $(125 / 125) \times 100 = 100\%$

Q:6 The correct answer is **option 2 i.e. 22.7%**

| Team | Matches Won | Total Matches Played | Matches Lost |
|------|-------------|----------------------|--------------|
| A | 300 | 900 | 600 |
| B | 500 | 1100 | 600 |
| C | 700 | 1500 | 800 |
| D | 400 | 1200 | 800 |
| E | 900 | 1700 | 800 |
| F | 600 | 1400 | 800 |

$$\text{Total wins} = 300 + 500 + 700 + 400 + 900 + 600 = 3400$$

$$\text{Total losses} = (600 + 600 + 800 + 800 + 800) = 4400$$

$$\text{Difference} = 1000$$

$$\text{Percent difference} = (1000 \div 4400) \times 100 \approx 22.7\%$$

Q:7 The correct answer is **option 3 i.e. 835**

Team E:

$$\text{Wins} = 900 \rightarrow 30\% = 270$$

$$\text{Losses} = 800 \rightarrow 40\% = 320$$

$$\text{Home matches (E)} = 590$$

Team B:

$$\text{Wins} = 500 \rightarrow 25\% = 125$$

$$\text{Losses} = 600 \rightarrow 20\% = 120$$

$$\text{Away matches (B)} = 245$$

$$\text{Total} = 590 + 245 = 835$$

Q:8 The correct answer is **option 4 i.e. 15 : 22**

$$\text{Wins (B + D + F)} = 500 + 400 + 600 = 1500$$

$$\text{Losses (B + D + F)} = 600 + 800 + 800 = 2200$$

$$\text{Ratio} = 1500 : 2200 = 15 : 22$$

Q:9 The correct answer is **option 3 i.e. 1600**

$$\text{Losses (A + C + E + F)} = 600 + 800 + 800 + 800 = 3000$$

$$\text{Losses (B + D)} = 600 + 800 = 1400$$

$$\text{Difference} = 3000 - 1400 = 1600$$

Q:10 The correct answer is **option 2 i.e. 3600**

Team D:

$$\text{Wins} = 400 \rightarrow \text{Points per win} = 25$$

$$\text{Losses} = 800 \rightarrow \text{Points per loss} = 8$$

$$\text{Points from wins} = 400 \times 25 = 10,000$$

$$\text{Points from losses} = 800 \times 8 = 6,400$$

$$\text{Difference} = 10,000 - 6,400 = 3,600$$

Q:11 The correct answer is **option 1 i.e. 35**

| Team | Senior Players | Total Players |
|------|----------------|---------------|
| P | 150 | 250 |
| Q | 150 | 150 |
| R | 250 | 250 |
| S | 150 | 150 |
| T | 150 | 250 |
| U | 150 | 150 |

$$\text{Team P juniors} = 250 - 150 = 100$$

$$20\% \text{ of } 100 = 20 \text{ added}$$

$$\text{New seniors} = 170$$

$$\text{Team T seniors} = 150 \rightarrow 10\% \text{ leave} = 15$$

$$\text{New seniors} = 135$$

$$\text{Difference} = 170 - 135 = 35$$

Q:12 The correct answer is **option 3 i.e. 100%**

$$\text{Total players} = 150 + 150 + 150 = 450$$

$$\text{Total senior players} = 150 + 150 + 150 = 450$$

$$\text{Percentage} = (450 / 450) \times 100 = 100\%$$

Q:13 The correct answer is **option 4 i.e. 7 : 8 : 7**

$$20\% \text{ of R seniors} = 20\% \text{ of } 250 = 50 \rightarrow \text{each gets } 25$$

$$\text{New seniors: P} = 175, \text{R} = 200, \text{T} = 175$$

$$\text{Required ratio} = 175 : 200 : 175 = 7 : 8 : 7$$

Q:14 The correct answer is **option 3 i.e. 250**

$$\text{Team P ratio} = 150 : 250 = 3 : 5$$

$$\text{For Team T seniors} = 150$$

$$\text{Total players} = (5 / 3) \times 150 = 250$$

Q:15 The correct answer is **option 4 i.e. 50**

$$150 + x = 250 - x$$

$$2x = 100$$

$$x = 50$$

Q:16 The correct answer is **option 1 i.e. 200**

| Hospital | Doctors | Total Staff | Non-Doctor Staff |
|----------|---------|-------------|------------------|
| P | 150 | 300 | 150 |
| Q | 200 | 200 | 0 |
| R | 250 | 300 | 50 |
| S | 100 | 150 | 50 |
| T | 200 | 250 | 50 |
| U | 150 | 200 | 50 |

Hospitals with total staff > 200 → P (300), R (300), T (250)

$$\text{Doctors} = 150 + 250 + 200 = 600$$

$$\text{Average} = 600 \div 3 = 200$$

Q:17 The correct answer is **option 3 i.e. 60**

$$\text{Hospital P non-doctors} = 150 \rightarrow 20\% = 30$$

$$\text{New doctors} = 180$$

$$\text{Hospital R doctors} = 250 - 10 = 240$$

$$\text{Difference} = 240 - 180 = 60$$

Q:18 The correct answer is **option 2 i.e. 5 : 2**

$$\text{Doctors} = 100 + 150 = 250$$

$$\text{Non-doctors} = 50 + 50 = 100$$

$$\text{Ratio} = 5 : 2$$

Q:19 The correct answer is **option 3 i.e. 240**

$$\text{Hospital R ratio} = 250 : 300 = 5 : 6$$

$$\text{For T, doctors} = 200$$

$$\text{Total staff} = (6 / 5) \times 200 = 240$$

Q:20 The correct answer is **option 2 i.e. 33½%**

$$\text{Total staff} = 300 + 250 + 200 = 750$$

$$\text{Non-doctors} = 150 + 50 + 50 = 250$$

$$\text{Percentage} = (250 / 750) \times 100 = 33\frac{1}{3}\%$$

Q:21 The correct answer is **option 2 i.e. 62.5**

| Company | Core Employees | Total Employees | Support Staff |
|---------|----------------|-----------------|---------------|
| P | 150 | 300 | 150 |
| Q | 200 | 250 | 50 |
| R | 300 | 300 | 0 |
| S | 100 | 200 | 100 |
| T | 250 | 300 | 50 |
| U | 150 | 200 | 50 |

Companies with total employees > 200 → P, Q, R, T

$$\text{Support staff} = 150 + 50 + 0 + 50 = 250$$

$$\text{Average} = 250 \div 4 = 62.5$$

Q:22 The correct answer is **option 3 i.e. 90**

$$\text{Support staff in P} = 150 \rightarrow 30\% = 45$$

$$\text{New core} = 150 + 45 = 195, \text{new support} = 105$$

$$\text{Difference} = 195 - 105 = 90$$

Q:23 The correct answer is **option 2 i.e. 62.5%**

$$\text{Core employees} = 100 + 150 = 250$$

$$\text{Total employees} = 200 + 200 = 400$$

$$\text{Percentage} = (250 / 400) \times 100 = 62.5\%$$

Q:24 The correct answer is **option 3 i.e. 100**

$$300 - x = 100 + x$$

$$2x = 200$$

$$x = 100$$

Q:25 The correct answer is **option 2 i.e. 5 : 12**

$$\text{Support staff} = 150 + 50 + 50 = 250$$

$$\text{Core employees} = 150 + 200 + 250 = 600$$

$$\text{Required ratio} = 250 : 600 = 5 : 12$$

Q:26 The correct answer is **option 2 i.e. 14 : 3**

| Cinema Hall | Premium Tickets Sold | Total Tickets | Regular Tickets |
|-------------|----------------------|---------------|-----------------|
| A | 300 | 400 | 100 |
| B | 350 | 450 | 100 |
| C | 400 | 450 | 50 |
| D | 350 | 400 | 50 |

$$\text{Premium tickets} = 350 + 350 = 700$$

$$\text{Regular tickets} = 100 + 50 = 150$$

$$\text{Required ratio} = 700 : 150 = 14 : 3$$

Q:27 The correct answer is **option 3 i.e. 23.08%**
 Average premium tickets of A and D = $(300 + 350) \div 2$
 $= 325$
 Difference = $400 - 325 = 75$
 Percentage = $(75 \div 325) \times 100 = 23.08\%$

Q:28 The correct answer is **option 4 i.e. 75**
 Regular tickets = $100 + 100 + 50 + 50 = 300$
 Average = $300 \div 4 = 75$

Q:29 The correct answer is **option 1 i.e. 250**
 New premium = $400 - 50 = 350$
 New regular = $50 + 50 = 100$
 Difference = $350 - 100 = 250$

Q:30 The correct answer is **option 1 i.e. 100**
 B + C total tickets = $450 + 450 = 900$
 A + D total tickets = $400 + 400 = 800$
 Difference = 100

Q:31 The correct answer is **option 3 i.e. 2 : 1**

| Outlet | Smartphones Sold | Total Smartphones | Non-Sold Smartphones |
|--------|------------------|-------------------|----------------------|
| A | 200 | 300 | 100 |
| B | 250 | 350 | 100 |
| C | 300 | 350 | 50 |
| D | 250 | 300 | 50 |

Non-sold in A = 100, Non-sold in C = 50
 Required ratio = $100 : 50 = 2 : 1$

Q:32 The correct answer is **option 3 i.e. 71.43%**
 Sold in B = 250, Total in B = 350
 Percentage = $(250 / 350) \times 100 = 71.43\%$

Q:33 The correct answer is **option 2 i.e. 250**
 Total sold = $200 + 250 + 300 + 250 = 1000$
 Average = $1000 \div 4 = 250$

Q:34 The correct answer is **option 2 i.e. 100**
 Difference = $300 - 200 = 100$

Q:35 The correct answer is **option 4 i.e. 50**
 Initial non-sold in B = 100
 New non-sold = $100 - 50 = 50$

Q:36 The correct answer is **option 2 i.e. 7 : 4**

| Company | Work from Home Employees | Total Employees | Work from Office Employees |
|---------|--------------------------|-----------------|----------------------------|
| P | 150 | 250 | 100 |
| Q | 100 | 200 | 100 |
| R | 200 | 250 | 50 |
| S | 150 | 200 | 50 |
| T | 100 | 150 | 50 |
| U | 200 | 200 | 0 |

WFH employees = $100 + 150 + 100 = 350$
 Office employees = $100 + 50 + 50 = 200$
 Required ratio = 7 : 4

Q:37 The correct answer is **option 3 i.e. 50**
 $WFH \geq 150 \rightarrow P, R, S, U$
 Office employees = $100 + 50 + 50 + 0 = 200$
 Average = $200 \div 4 = 50$

Q:38 The correct answer is **option 4 i.e. 50**
 $200 - x = 100 + x$
 $2x = 100$
 $x = 50$

Q:39 The correct answer is **option 2 i.e. 80**
 New WFH in P = $150 - 20 = 130$
 New WFH in R = $200 + 10 = 210$
 Difference = $210 - 130 = 80$

Q:40 The correct answer is **option 4 i.e. 14.29%**
 Average WFH of P and R = $(150 + 200) \div 2 = 175$
 Difference = $200 - 175 = 25$ (U has 25 less)
 Percentage = $(25 \div 175) \times 100 = 14.29\% \text{ less}$

Q:41 The correct answer is **option 2 i.e. 162.5**

| Library | Books Issued | Total Books | Not Issued Books |
|---------|--------------|-------------|------------------|
| P | 100 | 200 | 100 |
| Q | 150 | 250 | 100 |
| R | 200 | 250 | 50 |
| S | 100 | 150 | 50 |
| T | 150 | 200 | 50 |
| U | 200 | 250 | 50 |

Condition satisfy $\rightarrow R, S, T, U$
 Issued books = $200 + 100 + 150 + 200 = 650$
 Average = $650 \div 4 = 162.5$

Q:42 The correct answer is **option 1 i.e. 5 : 2**
 Issued books = $150 + 200 + 150 = 500$
 Not issued books = $100 + 50 + 50 = 200$
 Ratio = 5 : 2

Q:43 The correct answer is **option 2 i.e. 0**
 New issued in Q = $150 + 25 = 175$
 New issued in U = $200 - 25 = 175$
 Difference = 0

Q:44 The correct answer is **option 4 i.e. 50**
 $P + Q$ not issued = $100 + 100 = 200$
 $R + S + T$ not issued = $50 + 50 + 50 = 150$
 Difference = 50

Q:45 The correct answer is **option 2 i.e. 22.22%**
 Average issued of R and U = $(200 + 200) \div 2 = 200$
 Total issued (all libraries) = $100 + 150 + 200 + 100 + 150 + 200 = 900$
 Percentage = $(200 \div 900) \times 100 = 22.22\%$

Q:46 The correct answer is **Option 3 i.e. 18.**

Let, the number of sold units of item A and D on Tuesday are '4x' and '7x' respectively.
Also let, the number of sold units of item B and E on Tuesday are '5y' and '4y' respectively.
So, the number of sold units of item C on Tuesday = $7x + 7$

Since, number of sold units of item D is 38 less than that of item E.

$$\text{So, } 4y - 7x = 38 \quad \dots \dots \dots (1)$$

Since, number of sold units of item A is 95 less than that of item B.

$$\text{So, } 5y - 4x = 95 \quad \dots \dots \dots (2)$$

By equation (1) $\times 5$ – equation (2) $\times 4$:

$$\Rightarrow 20y - 35x - 20y + 16x = 190 - 380$$

$$\Rightarrow x = 10$$

From equation (1):

$$\Rightarrow 4y - 70 = 38$$

$$\Rightarrow y = 27$$

| Item | No. of units sold on Tuesday | Per unit cost of item (in ₹) | No. of units sold on Monday |
|------|------------------------------|------------------------------|-----------------------------|
| A | $4 \times 10 = 40$ | $40/5 = 8$ | $8 \times 8 = 64$ |
| B | $5 \times 27 = 135$ | $135/9 = 15$ | $15 \times 5 = 75$ |
| C | $70 + 7 = 77$ | $77/7 = 11$ | $11 \times 12 = 132$ |
| D | $7 \times 10 = 70$ | $70/10 = 7$ | $7 \times 9 = 63$ |
| E | $4 \times 27 = 108$ | $108/6 = 18$ | $18 \times 4 = 72$ |

The units sold of item D on Tuesday = 70

The units sold of item E = 108

The sum of the units sold of items D and E which sold on Tuesday = $70 + 108 = 178$

The units sold of item A on Monday = 64

The units sold of item A on Monday = 132

The sum of the units sold of items A and C which sold on Monday = $64 + 132 = 196$

Difference = $196 - 178 = 18$

Q:47 The correct answer is **Option 4 i.e. 5 : 9.**

Total units sold in items D and E together on Monday = $63 + 72 = 135$

Total units sold in items B and E together on Tuesday = $135 + 108 = 243$

Required ratio = $135 : 243 = 5 : 9$

Q:48 The correct answer is **Option 1 i.e. $53\frac{1}{8}\%$.**

Total amount received by selling 70 units of item D on Tuesday = $70 \times 7 = ₹490$

Total amount received by selling 40 units of item A on Tuesday = $40 \times 8 = ₹320$

Required percentage = $\frac{490 - 320}{320} \times 100 = 53\frac{1}{8}\%$

Q:49 The correct answer is **Option 3 i.e. None is true.**

From A:

Number of sold units of item A on Monday = 64

Number of sold units of item E on Monday = 72

Required ratio = $64 : 72 = 8 : 9$

So, A is not true.

From B:

Per units cost of item C = ₹11

Per units cost of item D = ₹7

Per units cost of item E = ₹18

Required average = $\frac{11+7+18}{3} = 12$

So, B is not true.

From C:

Total amount received by selling all the given units of item E on Tuesday = $108 \times 18 = ₹1944$

So, C is not true.

Hence, none is true.

Q:50 The correct answer is **Option 2 i.e. ₹ 3018.**

Total amount received by selling 75 units on item B on Mon = $15 \times 75 = ₹1125$

Total amount received by selling 132 units on item C on Mon = $11 \times 132 = ₹1452$

Total amount received by selling 63 units on item D on Mon = $7 \times 63 = ₹441$

Required sum = $1125 + 1452 + 441 = ₹3018$

Quick Tricks
By Sahil Sir



RRB SELECTION CONTROLLER FOUNDATION BATCH

by Sahil Sir

Validity 1 Year

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Exam Pattern

- Analytical & Mathematical Capability : 60 Marks
- Logical Capability : 20 Marks
- Mental Reasoning : 20 Marks

~~₹1999~~ ₹899



VENN DIAGRAM

Direction (Q1-Q5): Read the given information carefully and answer the following questions.

A survey is conducted among the people of a colony. Each person likes at least one of the fruits among apple, mango and banana. The total number of person who likes all three fruits is 10% of the people who like all three fruits. The total number of person who likes only mango and banana both is 90% of the person who like all three fruits. The total number of person who likes only mango is 110% more than the person who likes all three fruits. The total number of person who likes only banana is 28% more than the people who like only apple. The total number of person who likes only mango is 12% more than the person who likes only apple. The total number of person who like only mango is twice of the person who likes only mango and apple both. The difference between the person who likes only mango and the person who likes only mango and banana both is 48.

Q1. Find the total number of person who likes at least two fruits.

- | | |
|--------|--------|
| 1. 145 | 2. 154 |
| 3. 162 | 4. 108 |

Q2. The total number of person who likes mango is what percent of the person who likes only apple.

1. 275%
2. 269%
3. 285%
4. 385%

Q3. Find the total number of person who do not like banana.

- | | |
|--------|--------|
| 1. 210 | 2. 202 |
| 3. 203 | 4. 201 |

Q4. The total number of persons who likes only two fruits is what percent of the person who like only mango.

1. 140%
2. 110%
3. 125%
4. 150%

Q5. Find the total number of person who likes at most two types of fruits.

1. 145
2. 360
3. 105
4. 280

Direction (Q6-Q10): Read the given information carefully and answer the following questions.

There are 3 types of shirts in a showroom that is plain shirt, lining shirt, and printed shirt. Each of the customers bought at least one shirt among them on a particular day. $11\frac{3}{7}\%$ of the persons had bought all three types of shirts. The total number of person who bought only lining and printed shirt together was 12.5% more to the person who bought all three types of the shirt. The total number of person who bought only plain shirt is 10 more than the person who bought only printed shirt. Person who bought both plain and lining shirt but not printed shirt is half of the person who bought only lining shirt. The total number of person who bought only printed and lining shirt together is 50% more than to the person who bought only lining and plain shirt together. The total number of person who bought plain and lining shirt is 40% of the person who bought only plain shirt and the total number of person who bought all three shirts is 40.

Q6. Find the total number of person who bought only one type of shirt.

1. 200
2. 110
3. 150
4. 180

Q7. If the shopkeeper earns Rs 75 profit on each lining shirt then find the total profit earn by shopkeeper on lining shirt.

1. 13875
2. 7500
3. 7875
4. 13125

Q8. The total number of person who bought only printed shirt is what percent less to the person who bought only plain shirt?

1. $13\frac{1}{3}\%$
2. $12\frac{1}{4}\%$
3. $16\frac{2}{3}\%$
4. 25%

Q9. Find the total number of person who bought at least two types of shirts.

1. 330
2. 280
3. 200
4. 150

Q10. Find the total number of printed shirts sold by the shopkeeper.

- 1. 65
- 2. 110
- 3. 185
- 4. 145

Direction (Q11-Q15): Read the given information carefully and answer the following questions.

A survey is conducted by a tourism company in which 900 people participated. They like at least one of the state for tourism among Himachal Pradesh, Rajasthan, and Goa. The total number people who like only Goa are $28\frac{4}{7}\%$ more than to the people who like only Rajasthan. The total number of persons who like Himachal Pradesh is 360. The total number of persons who like all three destinations is 9% of the total number of persons. The total number of persons who like only Himachal Pradesh and Rajasthan together is 20% more than the people who like only Goa and Himachal Pradesh together. The total number of people who like only Rajasthan and Goa together is equal to the difference between the people who like only Rajasthan and only Goa. The ratio of the people who like only Himachal Pradesh and the people who like only Goa is 2 : 3. The total number of person who likes only Himachal Pradesh is 4 times of the persons who like only Himachal Pradesh and Goa together.

Q11. Find the total number of person who likes Goa and Rajasthan.

- 1. 60
- 2. 480
- 3. 540
- 4. 720

Q12. Find the total number of person who like Rajasthan but not like Himachal Pradesh.

- 1. 210
- 2. 264
- 3. 345
- 4. 270

Q13. The total number of people who like all three destinations are what percentage of the people who like only two destinations?

- 1. 48%
- 2. 51%
- 3. 54%
- 4. 46%

Q14. Find the total number of person who likes at least two destinations.

- 1. 159
- 2. 240
- 3. 175
- 4. 259

Q15. Find the ratio of the people who like only one destination.

- 1. 6 : 7 : 18
- 2. 6 : 9 : 17
- 3. 9 : 3 : 5
- 4. 6 : 7 : 9

Direction (Q16-Q20): Read the given information carefully and answer the following questions.

1000 students are preparing for government exams in a coaching institute. They are preparing for at least one of the exam among Bank, SSC, and Railway. The total number of students who are preparing for only bank is $77\frac{7}{9}\%$ of the students who are preparing for only SSC. The total number of students who are preparing for only railway is 30 less than the students who are preparing for only Bank. The total number of students who are preparing for SSC and railway both together is half of the students who are preparing of only bank. The total number of students who are preparing for only railway is twice of the students who are preparing for bank and railway both together. The total number of students who are preparing for bank and SSC both together is 10 less than the students who are preparing for SSC and Railway both together. The total number of students who are preparing for all three exams together is 5% of the total number of students.

Q16. Find the total number of students who are preparing for at least two exams but not for railway exam.

- 1. 95
- 2. 185
- 3. 200
- 4. 145

Q17. The total number of students who are preparing for only one exam is what percent of the total number of students?

- 1. 60%
- 2. 44%
- 3. 66%
- 4. 76%

Q18. Find the ratio of the total number of students who are preparing for SSC exam and the total number of students who are preparing for Bank exams.

- 1. 106 : 99
- 2. 99 : 104
- 3. 104 : 99
- 4. 104 : 89

Q19. Find the percentage of the students who are preparing for only two exams.

- 1. 39%
- 2. 29%
- 3. 19%
- 4. 28.5%

Q20. The total number of students who are preparing for only SSC is what percent of the students who are preparing for only railway.

- 1. 154%
- 2. 105%
- 3. 150%
- 4. 160%

Direction (Q21-Q25): Read the given information carefully and answer the following questions.

In the final examination of the school some students failed in at least one of the subjects among English, Math, and Science. The total number of students who failed in only math is 10 more than the students who failed in only English and 10% of the students failed in only math. The total number of students who failed in only science is 60% of the students who failed in only English. The total number of students who failed in at least two subjects is 72. The total number of students who failed in only English and math together is 2 more than the students who failed in only math and science together and 8 more than the students who failed in only English and science together. The total number of students who failed in only math and science together is half of the students who failed in only math. The total number of students who failed in only science is 22 less than the students who failed in only math.

Q21. Find the total number of students who passed in all subjects.

- 1. 260
- 2. 160
- 3. 240
- 4. 340

Q22. Find the total number of students who failed in at least two subjects.

- 1. 62
- 2. 72
- 3. 52
- 4. 82

Q23. Find the total number of students who passed in math.

- 1. 320
- 2. 315
- 3. 302
- 4. 202

Q24. Find the percentage of the total students who failed science subject.

- 1. 30%
- 2. 40%
- 3. 25%
- 4. 17%

Q25. Find the total percentage of students who failed in only one subject.

- 1. 24%
- 2. 22%
- 3. 26%
- 4. 32%

Direction (Q26-Q30): Read the given information carefully and answer the following questions.

A shopkeeper sells TV, Laptop, and Fridge on Diwali. Each of the persons buy at least one of the item among them. The total number of person who buy only laptop is 80% of the people who buy only TV and the total number of person who buy only TV and fridge both together is 20% more than the people who buy only TV. The total number of person who buys only TV and Laptop both together is 90% of the people who buy only TV and fridge together. The total number of people who buy only TV and Laptop together is 6 more than the people who buy only TV. Only 5% people buy all three items. The total number of people who buy only two items is 256 and the total number of people who buy at least two items is 281.

Q26. Find the percentage of people who do not buy TV.

- 1. 43%
- 2. 46%
- 3. 55%
- 4. 65%

Q27. Find the total number of people who buy at least two items but not buy fridge.

- 1. 81
- 2. 85
- 3. 115
- 4. 110

Q28. The total number of person who buy only Laptop is what percentage of the people who buy only Fridge?

- 1. 81%
- 2. 73%
- 3. 71%
- 4. 61%

Q29. Find the total number of person who buys at most two items.

- 1. 457
- 2. 256
- 3. 281
- 4. 475

Q30. The total number of person who buy only fridge is what percent of the people who buy only TV?

- 1. 12%
- 2. 87%
- 3. 112%
- 4. 124%

Direction (Q31-Q35): Read the given information carefully and answer the following questions.

A shopkeeper sells three types of food item that are Pizza, burger, and noodles. 1150 customers visit his shop on a particular day and only 48 customers among them who do not buy any item among them. The ratio of the customers who buy only pizza and noodles together is 5 : 4. The total number of customers who buy only burger is double to the customers who buy only burger and noodles both together. The total number of customers who buy only pizza is 50% more to the persons who buy only burger. The total number of persons who buy only burger and pizza together are 20 less than the person who like only pizza and noodles together. The total number of persons who buy all three items are $13\frac{1}{23}\%$ less than the persons who buy only burger. 180 persons buy only noodles among the total number of person who buy the item from the shopkeeper.

Q31. Find the total number of people who only buy two items together.

1. 187
2. 302
3. 462
4. 115

Q32. The total number of persons who buy only burger is what percent more to the person who buy only pizza and noodles together?

1. 40%
2. 50%
3. 60%
4. 69%

Q33. Find the total number of persons who buy at least two items.

1. 302
2. 462
3. 1102
4. 596

Q34. Find the total number of people who buy noodles.

1. 180
2. 576
3. 184
4. 547

Q35. Find the difference between the person who buy only one item and the person who buy at least two items.

1. 378
2. 254
3. 184
4. 178

Directions (Q36-Q40): Read the given information carefully and answer the following questions.

A party was organized in a college and 400 guests come into a party. They like at least one of the drinks among coffee, juice, and shake. 10% people like only coffee and juice both together. The total number of people who like only coffee is 20% more than the people who like only shake. The total number of people who like only juice is $13\frac{1}{3}\%$ more than the people who like only juice and shake together. The total number of people who like all three drinks is one third of the people who like only juice and shake both together. The total number of people who like only shake is 25% more to the people who like only coffee and juice together. The total number of people who like only coffee and shake together is $13\frac{1}{3}\%$ less to the people who like only juice and shake together.

Q36. Find the total number of people who like only two types of drinks.

1. 180
2. 205
3. 105
4. 165

Q37. Find the percentage of people who like only one type of drink but not like shake.

1. 35.25%
2. 36.25%
3. 37.50%
4. 38.50%

Q38. Find the ratio of the people who like only coffee and the people who like only juice.

1. 6 : 5
2. 13 : 17
3. 12 : 19
4. 12 : 17

Q39. Find the total number of people who like at least three type of drink.

1. 205
2. 180
3. 25
4. 75

Q40. The total number of people who like only juice is what percent of people who like only shake?

1. 85%
2. 170%
3. 130%
4. 140%

Direction (Q41-Q45): Read the given information carefully and answer the following questions.

There are 5700 persons in a city and each person has at least one vehicle among Bike, Scooter, and Car. The total number of persons who have bike and scooter both but not car is 20% more than the persons who have all three vehicles. The total number of persons who have only bike and car together is 50% of the person who have only bike and scooter together. The total number of persons who have only bike and car both is 32% of the person who have only scooter. 10% of the people have all three vehicles. The ratio of the person who have only bike and the person who have only scooter is 4 : 5. The total number of persons who have only bike and scooter both is 60% of the person who have only bike.

Q41. Find the total number of persons who have only two vehicles.

- 1. 1482
- 2. 1425
- 3. 1282
- 4. 1842

Q42. The total number of persons who have only bike is what percentage of the person who have only scooter?

- 1. 60%
- 2. 45%
- 3. 75%
- 4. 80%

Q43. Find the difference between the person who have only scooter and the persons who have car.

- 1. 342
- 2. 1026
- 3. 855
- 4. 1425

Q44. The total number of persons who have at least two vehicles is what percentage of the total number of persons?

- 1. 42%
- 2. 48%
- 3. 36%
- 4. 46%

Q45. Find the average of the persons who have exactly one vehicle.

- 1. 1284
- 2. 1226
- 3. 1218
- 4. 1216

Direction (Q46-Q50): Read the given information carefully and answer the following questions.

There are 3000 people in a town and there are 3 banks in the town. 200 people in town do not have any accounts in any bank. 20% people of the town opened their account in only SBI bank. 10% people of the town opened their account in only CBI and BOI both. The average of the people who have opened their account in only two banks is 220. The total number of people who have opened their account in only SBI and CBI both is 80% of the people who have their account in only SBI and BOI both. The total number of people who have opened their account in only BOI is 25% more than the people who have opened their account in only SBI bank. The total number of people who have opened their account in only CBI is 310 more to the people who have open their account in all three banks.

Q46. Find the total number of people who have opened their account in all three banks.

- 1. 440
- 2. 240
- 3. 300
- 4. 330

Q47. The total number of people who have opened their account in only CBI is what percent of the people who have opened their account in only BOI?

- 1. $73\frac{1}{3}\%$
- 2. $63\frac{1}{3}\%$
- 3. $77\frac{1}{3}\%$
- 4. $83\frac{1}{3}\%$

Q48. Find the total number of people who have opened their account in at least two banks.

- 1. 1000
- 2. 750
- 3. 900
- 4. 850

Q49. Find the total number of people who have opened their account in CBI bank.

- 1. 1920
- 2. 1190
- 3. 1890
- 4. 1290

Q50. Find the ratio of the people who have their account in SBI bank and the people who have their account in BOI.

- 1. 28 : 29
- 2. 24 : 19
- 3. 25 : 29
- 4. 24 : 29

Answer Key

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| 1. (1) | 2. (2) | 3. (4) | 4. (3) | 5. (2) |
| 6. (1) | 7. (4) | 8. (1) | 9. (4) | 10. (3) |
| 11. (4) | 12. (4) | 13. (2) | 14. (2) | 15. (4) |
| 16. (1) | 17. (3) | 18. (4) | 19. (2) | 20. (3) |
| 21. (3) | 22. (2) | 23. (3) | 24. (4) | 25. (2) |
| 26. (2) | 27. (1) | 28. (3) | 29. (4) | 30. (3) |
| 31. (3) | 32. (3) | 33. (2) | 34. (4) | 35. (4) |
| 36. (1) | 37. (2) | 38. (4) | 39. (3) | 40. (2) |
| 41. (1) | 42. (4) | 43. (2) | 44. (3) | 45. (4) |
| 46. (2) | 47. (1) | 48. (3) | 49. (3) | 50. (4) |

Answers and Solutions

Q1. The correct answer is **option 1** i.e. **145**.

Let's assume the total number of person who likes all three types of fruits = x

The total number of person who like only mango and banana both = $0.9x$

The total number of person who like only mango = $2.1x$

The difference between the person who likes only mango and the person who likes only mango and banana both is 48.

$$2.1x - 0.9x = 48$$

$$X = 40$$

The total number of person who like only mango and banana both = $0.9 \times 40 = 36$

The total number of person who like only mango = $2.1 \times 40 = 84$

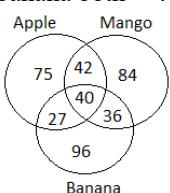
The total number of person who like only apple = $84 \times 100/112 = 75$

The total number of person who likes only banana = $75 \times 128/100 = 96$

The total number of person = $40 \times 100/10 = 400$

The total number of person who like only apple and mango both = $84/2 = 42$

The total number of person who like only apple and banana both = $400 - (75 + 84 + 96 + 42 + 40 + 36) = 27$



The total number of person who likes at least two fruits = $42 + 27 + 36 + 40 = 145$

Q2. The correct answer is **option 2** i.e. **269%**.

Required percentage = $(84 + 42 + 40 + 36)/75 \times 100 = 269\%$

Q3. The correct answer is **option 4** i.e. **201**.

The total number of person who like apple and mango but not like banana = $75 + 42 + 84 = 201$

Q4. The correct answer is **option 3** i.e. **125%**.

Required percentage = $(42 + 27 + 36)/84 \times 100 = 125\%$

Q5. The correct answer is **option 2** i.e. **360**.

The total number of person who likes at most two types of fruits = $400 - 40 = 360$

Q6. The correct answer is **option 1** i.e. **200**.

The total number of person who bought all three types of shirts = 40

$$\frac{80}{7} \% = 40$$

$$100\% = 280/80 \times 100 = 350$$

The total number of person who bought only lining and printed shirt together = $40 \times 112.5/100 = 45$

The total number of person who bought only lining and plain shirt = $45 \times (100/150) = 30$

The total number of person who bought only plain shirt = x

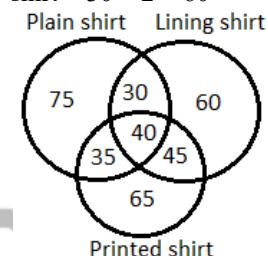
The total number of person who bought plain and lining shirt = 40% of the person who bought only plain shirt

$$30 = 40/100 \times x$$

$$X = 75$$

The total number of person who bought only printed shirt = $x - 10 = 75 - 10 = 65$

The total number of person who bought only lining shirt = $30 \times 2 = 60$



The total number of person who bought only one type of shirt = $75 + 60 + 65 = 200$

Q7. The correct answer is **option 4** i.e. **13125**.

The total number of lining shirt selling by the shopkeeper = $60 + 30 + 40 + 45 = 175$

Profit earn = $75 \times 175 = \text{Rs } 13125$

Q8. The correct answer is **option 1** i.e. **$13\frac{1}{3}\%$** .

Required percentage = $(75 - 65)/75 \times 100 = 13\frac{1}{3}\%$

Q9. The correct answer is **option 4** i.e. **150**.

The total number of person who bought at least two types of shirt = $30 + 35 + 45 + 40 = 150$

Q10. The correct answer is **option 3** i.e. **185**.

The total number of printed shirts sold by the shopkeeper = $35 + 40 + 45 + 65 = 185$

Q11. The correct answer is **option 4** i.e. **720**.

The total number of person = 900

The total number of person who like Himachal Pradesh = 360

The total number people who like only Goa are $28\frac{4}{7}\% = \frac{2}{7}$ more than to the people who like only Rajasthan.

The total number people who like only Goa = $9x$

The total number of people who like only Rajasthan = $7x$

The total number of person who like only Himachal Pradesh = $9x/3 \times 2 = 6x$

The total number of person who like all three destinations = $900 \times 9\% = 81$

Let's assume the total number of persons who like only Himachal Pradesh and Rajasthan together = $6y$

The total number of persons who like only Himachal Pradesh and Goa together = $5y$

$$5y + 6y + 6x + 81 = 360$$

$$11y + 6x = 279 \dots\dots(1)$$

The total number of people who like only Rajasthan and Goa together = $9x - 7x = 2x$

The total number of person who likes only Himachal Pradesh is 4 times of the persons who like only Himachal Pradesh and Goa together

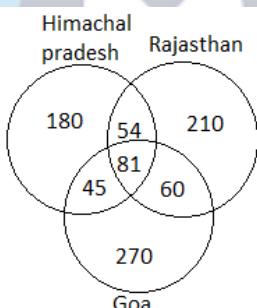
$$6x = 4 \times 5y = 20y \dots\dots(2)$$

Put the value of $6x$ in eq. 1

$$11y + 20y = 279$$

$$y = 9$$

$$x = 20 \times 9/6 = 30$$



The total number of person who likes Goa and Rajasthan = $900 - 180 = 720$

Q12. The correct answer is **option 4** i.e. **270**.

The total number of person who like Rajasthan but not like Himachal Pradesh = $210 + 60 = 270$

Q13. The correct answer is **option 2** i.e. **51%**.

Required percentage = $81/159 \times 100 = 50.94\% = 51\%$

Q14. The correct answer is **option 2** i.e. **240**.

The total number of person who likes at least two destinations = $54 + 45 + 60 + 81 = 240$

Q15. The correct answer is **option 4** i.e. **6 : 7 : 9**.

The required ratio = $180 : 210 : 270$

= **6 : 7 : 9**

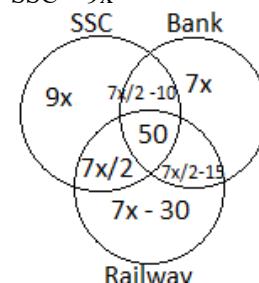
Q16. The correct answer is **option 1** i.e. **95**.

The total number students who are preparing for all three exams = $1000 \times 5/100 = 50$

The total number of students who are preparing for only bank is $(77\frac{7}{9}\% = 7/9)$ of the students who are preparing for only SSC.

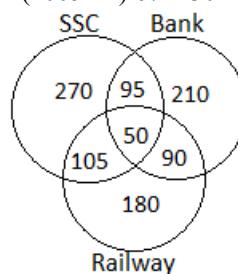
So, the total number of students who are preparing for only bank = $7x$

The total number of students who are preparing for only SSC = $9x$



$$9x + 7x + 7x - 30 + 50 + 7x/2 + 7x/2 - 10 + 7x/2 - 15 = 1000$$

$$X = (1000 \times 2)/67 = 30$$



The total number of students who are preparing for at least two exams but not for railway exam = 95 (SSC + BANK together)

Q17. The correct answer is **option 3** i.e. **66%**.

Required percentage = $(270 + 180 + 210)/1000 \times 100 = 66\%$

Q18. The correct answer is **option 4** i.e. **104 : 89**.

The ratio of the students who are preparing for SSC exam and Bank exams = $(270 + 95 + 105 + 50) : (95 + 210 + 50 + 90) = 520 : 445$

= **104 : 89**

Q19. The correct answer is **option 2** i.e. **29%**.

Required percentage = $(95 + 105 + 90)/1000 \times 100 = 29000/1000 = 29\%$

Q20. The correct answer is **option 3** i.e. **150%**.

Required percentage = $270/180 \times 100 = 150\%$

Q21. The correct answer is **option 3** i.e. **240**.

Solution: Let's assume the total number of students who failed in only English = x

The total number of students who failed in only math = $x + 10$

The total number of students who failed in only science = $0.6x$

$$x + 10 - 0.6x = 22$$

$$x = 30$$

The total number of students of the school:

$$10\% = x + 10 = 40$$

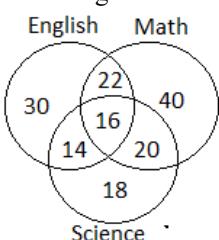
$$100\% = 400$$

The total number of students who failed in only math and science together = $40/2 = 20$

The total number of students who failed in only English and math together = $20 + 2 = 22$

The total number of students who failed in only English and science together = $22 - 8 = 14$

Venn diagram of failed students:



The total number of students who passed in all subjects = $400 - (30 + 22 + 40 + 14 + 16 + 20 + 18) = 400 - 160 = 240$

Q22. The correct answer is **option 2** i.e. **72**.

The total number of students who failed in two subjects = $22 + 14 + 20 + 16 = 72$

Q23. The correct answer is **option 3** i.e. **302**.

The total number of students who passed in math = $400 - (40 + 22 + 16 + 20) = 302$

Q24. The correct answer is **option 4** i.e. **17%**.

Required percentage = $(16 + 14 + 20 + 18)/400 \times 100 = 17\%$

Q25. The correct answer is **option 2** i.e. **22%**.

Required percentage = $(30 + 40 + 18)/400 \times 100 = 22\%$

Q26. The correct answer is **option 2** i.e. **46%**.

The total number of person who buy only TV = x

The total number of person who buy only TV and fridge both = $1.2x$

The total number of person who buy only TV and Laptop both = $1.2x \times 90/100 = 1.08x$

$$1.08x - x = 6$$

$$X = 75$$

The total number of person who buy only laptop = $75 \times 80/100 = 60$

The total number of person who buy only two items = 256

The total number person who buy only laptop and fridge together = y

$$1.2x + 1.08x + y = 256$$

$$1.2 \times 75 + 1.08 \times 75 + y = 256$$

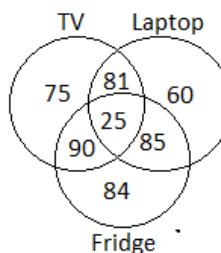
$$y = 85$$

The total number of person who buy all three items = $281 - 256 = 25$

$$5\% = 25$$

$$100\% = 500$$

The total number of person who buy only fridge = $500 - (75 + 60 + 281) = 84$



Required percentage = $(60 + 85 + 84)/500 \times 100 = 45.8\% = 46\%$

Q27. The correct answer is **option 1** i.e. **81**.

The total number of people who buy at least two items but not buy fridge = 81

Q28. The correct answer is **option 3** i.e. **71%**.

Required percentage = $60/84 \times 100 = 71.4\% = 71\%$

Q29. The correct answer is **option 4** i.e. **475**.

The total number of person who buys at most two items = $500 - 25 = 475$

Q30. The correct answer is **option 3** i.e. **112%**.

Required percentage = $84/75 \times 100 = 112\%$

Q31. The correct answer is **option 2** i.e. **302**.

Let's assume the total number of person who buy only pizza and noodles both together = $5x$

The total number of persons who buy only burger and pizza together = $5x - 20$

The total number of persons who buy only noodles and burger both together = $4x$

The total number of persons who buy only burger = $8x$

The total number of persons who buy only burger = $8x \times (150/100) = 12x$

The total number of persons who buy all three items = $8x/23 \times 20 = 160x/23$

The total number of persons who buy the item from the shopkeeper = $1150 - 48 = 1102$

The total number of persons who buy only noodles = 180

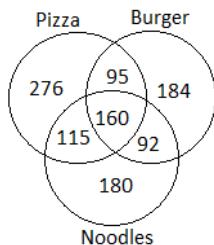
Remaining persons = $1102 - 180 = 922$

$$5x + 4x + 8x + 12x + 5x - 20 + 160x/23 = 922$$

$$34x + 160x/23 = 942$$

$$(782x + 160x)/23 = 942$$

$$x = 23$$



The total number of people who only buy two items together = $95 + 115 + 92 = 302$

Q32. The correct answer is **option 3** i.e. **60%**.

$$\text{Required percentage} = (184 - 115)/115 \times 100 = 60\%$$

Q33. The correct answer is **option 2** i.e. **462**.

The total number of persons who buy at least two items = $95 + 115 + 92 + 160 = 462$

Q34. The correct answer is **option 4** i.e. **547**.

The total number of people who buy noodles = $115 + 160 + 92 + 180 = 547$

Q35. The correct answer is **option 4** i.e. **178**.

The difference between the person who buy only one item and the person who buy at least two items = $(276 + 184 + 180) - (95 + 115 + 92 + 160)$
= $640 - 462$
= 178

Q36. The correct answer is **option 1** i.e. **180**.

The total number of people in the party = 400

People who like only coffee and juice both together = $10\% \text{ of } 400 = 40$

The total number of people who like only shake = $40 \times 125/100 = 50$

The total number of people who like only coffee = $50 \times 120/100 = 60$

The total number of people who like only juice and shake together = $3x$

The total number of people who like all three drinks = x

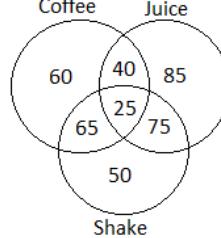
The total number of people who like only juice = $3x \times (340/300) = 17x/5$

The total number of people who like only coffee and shake together = $3x \times (260/300) = 13x/5$

$$40 + 50 + 60 + 3x + x + 17x/5 + 13x/5 = 400$$

$$50x/5 = 250$$

$$X = 25$$



The total number of people who like only two types of drinks = $65 + 75 + 40 = 180$

Q37. The correct answer is **option 2** i.e. **36.25%**.

$$\text{Required percentage} = (60 + 85)/400 \times 100 = 36.25\%$$

Q38. The correct answer is **option 4** i.e. **12 : 17**.

The ratio of the people who like only coffee and the people who like only juice = $60 : 85 = 12 : 17$

Q39. The correct answer is **option 3** i.e. **25**.

The total number of people who like at least three type of drink = 25

Q40. The correct answer is **option 2** i.e. **170%**.

$$\text{Required percentage} = 85/50 \times 100 = 170\%$$

Q41. The correct answer is **option 1** i.e. **1482**.

The total number of person = 5700

The total number of person who have all three vehicles = 10% of 5700 = 570

The total number of persons who have bike and scooter both but not car = 120% of 570 = 684

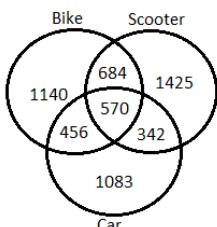
The total number of persons who have only bike and car together = 50% of 684 = 342

The total number of person who have only bike = $684 \times 100/60 = 1140$

The total number of person who have only scooter = $1140/4 \times 5 = 1425$

The total number of person who have only bike and car together = $1425 \times 32/100 = 456$

The total number of person who have only car = $5700 - (570 + 684 + 342 + 1140 + 1425 + 456) = 1083$



The total number of persons who have only two vehicles = $684 + 456 + 342 = 1482$

Q42. The correct answer is **option 4** i.e. **80%**.

Required percentage = $1140/1425 \times 100 = 80\%$

Q43. The correct answer is **option 2** i.e. **1026**.

The difference between the persons who have only scooter and the persons who have car = $(1083 + 570 + 456 + 342) - 1425 = 1026$

Q44. The correct answer is **option 3** i.e. **36%**.

Required percentage = $(684 + 342 + 456 + 570)/5700 \times 100 = 36\%$

Q45. The correct answer is **option 4** i.e. **1216**.

The average of the persons who have exactly one vehicle = $(1140 + 1425 + 1083)/3 = 3648/3 = 1216$

Q46. The correct answer is **option 2** i.e. **240**.

The total number of people of the town = 3000

The total number of people who have opened their account = $3000 - 200 = 2800$

The total number of people who have their account in SBI = 20% of 3000 = 600

The total number of people who have opened their account in only CBI and BOI both = 10% of 3000 = 300

The sum of the people who have opened their account in only two banks = $3 \times 220 = 660$

The total number of people who have opened their account in only SBI and CBI both = 5x

The total number of people who have opened their account in only SBI and BOI both = 4x

So,

$$5x + 4x + 300 = 660$$

$$9x = 360$$

$$X = 40$$

The total number of people who have their account in BOI = $600 \times 125/100 = 750$

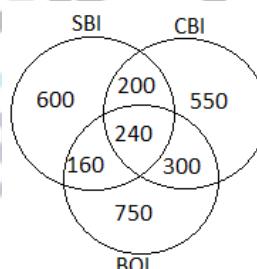
The total number of people who have their account in CBI = $y + 310$

The total number of people who have open their account in all three bank = y

$$600 + 750 + 300 + 4x + 5x + y + y + 310 = 2800$$

$$1960 + 360 + 2y = 2800$$

$$Y = 480/2 = 240$$



The total number of people who have opened their account in all three banks = **240**

Q47. The correct answer is **option 1** i.e. **$73\frac{1}{3}\%$** .

Required percentage = $550/750 \times 100 = 73\frac{1}{3}\%$

Q48. The correct answer is **option 3** i.e. **900**.

The total number of people who have opened their account in at least two banks = $200 + 160 + 300 + 240 = 900$

Q49. The correct answer is **option 4** i.e. **1290**.

The total number of people who have opened their account in CBI bank = $550 + 300 + 200 + 240 = 1290$

Q50. The correct answer is **option 4** i.e. **24 : 29**.

The total number of people who have their account in SBI bank = $600 + 200 + 240 + 160 = 1200$

The total number of people who have their account in BOI = $750 + 160 + 240 + 300 = 1450$

Required ratio = $1200 : 1450 = 24 : 29$

STATISTICAL CURVE DISTRIBUTION

Directions (Q1 – Q5): A multinational company analyzed the performance ratings of its 20,000 employees. The scores are found to follow a perfect Normal Distribution curve with a Mean score of 70 and a Standard Deviation of 10 units.

Q1. Approximately how many employees scored between 60 and 80 marks?

1. 6,800
2. 10,000
3. 13,600
4. 19,000

Q2. If "Top Performers" are defined as those scoring above 90, how many employees fall into this category?

- | | |
|--------|--------|
| 1. 500 | 2. 470 |
| 3. 300 | 4. 235 |

Q3. In this specific distribution, what are the values for the Mean, Median, and Mode?

1. Mean = 70, Median = 60, Mode = 50
2. Mean = 70, Median = 70, Mode = 70
3. Mean = 80, Median = 70, Mode = 60
4. Insufficient Information

Q4. What percentage of employees scored less than 50 marks?

1. 2.5%
2. 5%
3. 16%
4. 0.15%

Q5. Find the difference between the number of employees scoring between 60–80 and those scoring between 50–90.

1. 4,200
2. 5,400
3. 6,800
4. 2,700

Directions (Q6 – Q10): A research institute conducted a standardized cognitive test on a large sample of 50,000 participants. The resulting scores are found to follow a perfect Normal Distribution with a Mean of 115 points and a Standard Deviation of 12 points.

Q6. What is the total number of participants who scored "At Least" 127 marks?

1. 8,000
2. 7,925
3. 8,100
4. 7,500

Q7. Approximately how many participants scored between 91 and 103 marks?

1. 6,750
2. 9,200
3. 13,500
4. 4,850

Q8. If the "High Ability" threshold is set at 3 standard deviations above the mean, what is the minimum score required to be in this group?

1. 139
2. 145
3. 151
4. 127

Q9. What is the ratio of participants scoring between 103–127 to those scoring between 79–151?

1. 680 : 997
2. 340 : 680
3. 95 : 99
4. 1 : 2

Q10. A participant claims to be in the "Bottom 2.5%" of the distribution. What is the maximum score they could have achieved?

1. 103
2. 79
3. 91
4. 115

Directions (Q11 – Q15): A global e-commerce giant monitors the 'Lead Time' (the total time elapsed from order placement to delivery) for its Prime shipments. The lead times are found to follow a perfect Normal Distribution with a Mean of 42 hours and a Standard Deviation of 4 hours. The analysis is based on a sample of 40,000 shipments.

Q11. Determine the number of shipments that were delivered in a time frame spanning 38 to 50 hours.

1. 27,200
2. 32,600
3. 33,400
4. 31,100

Q12. What is the probability that a randomly selected shipment experienced a delay exceeding 2 standard deviations from the mean?

1. 5%
2. 2.5%
3. 0.3%
4. 16%

Q13. If the company guarantees delivery within 50 hours, what percentage of shipments fail to meet this guarantee?

1. 5%
2. 2.5%
3. 13.5%
4. 34%

Q14. Calculate the total count of "Express Deliveries," defined as those completed in less than 34 hours.

1. 600
2. 1,000
3. 135
4. 5,400

Q15. Identify the range of hours within which exactly 99.7% of all monitored shipments were delivered.

1. 34 – 50 hours
2. 38 – 46 hours
3. 30 – 54 hours
4. 42 – 54 hours

Directions (Q16 – Q20): A clinical study measured the fasting glucose levels of 5,000 patients to identify trends in metabolic health. The results indicate that the glucose levels (measured in mg/dL) are normally distributed with a Mean of 100 mg/dL and a Standard Deviation of 15 mg/dL.

Q16. If a "Normal" glucose level is defined as being between 85 and 115 mg/dL, what percentage of patients fall in this category?

- | | |
|--------|--------|
| 1. 50% | 2. 68% |
| 3. 95% | 4. 34% |

Q17. Patients with levels above 130 mg/dL are flagged for follow-up. What percentage of the study group requires a follow-up?

- | | |
|----------|--------|
| 1. 2.5% | 2. 5% |
| 3. 13.5% | 4. 16% |

Q18. What is the percentage of patients with glucose levels below 70 mg/dL?

1. 0.15%
2. 2.5%
3. 5%
4. 13.5%

Q19. How many patients in the study had a glucose level between 70 and 130 mg/dL?

1. 4,750
2. 3,400
3. 2,500
4. 4,985

Q20. What is the difference in the number of patients scoring between 100–115 and those scoring between 70–85?

1. 500
2. 0 (They are equal)
3. 1,025
4. 250

Directions (Q21 – Q25): A regional weather station analyzed the annual rainfall records of a specific valley over a historical period of 200 years. The data indicates that the annual rainfall (measured in mm) follows a perfect Normal Distribution with a Mean of 1,200 mm and a Standard Deviation of 150 mm.

Q21. In how many years was the recorded rainfall between 1,050 mm and 1,350 mm?

1. 68
2. 136
3. 150
4. 190

Q22. A "Drought Year" is defined as any year where rainfall is less than 900 mm. How many such years occurred in this 200-year period?

1. 5
2. 10
3. 32
4. 16

Q23. What is the probability that a randomly selected year from this data had rainfall exceeding 1,500 mm?

1. 5%
2. 2.5%
3. 13.5%
4. 0.15%

Q24. What is the ratio of years with "Moderate Rainfall" (1,050–1,350 mm) to years with "Extreme Rainfall" (less than 750 mm or more than 1,650 mm)?

1. 680 : 3
2. 340 : 1
3. 95 : 5
4. Insufficient Data

Q25. If the Median rainfall for this valley is exactly 1,200 mm, what can we conclude about the skewness of this distribution?

1. It is Positively Skewed
2. It is Negatively Skewed
3. It is Zero-Skewed (Symmetrical)
4. Skewness cannot be determined from the median alone

Directions (Q26 – Q30): A high-tech manufacturing plant utilizes robotic arms to cut glass panels for smartphones. The precision of these cuts is measured as the deviation from the intended target length (where a deviation of 0.00 mm is a perfect cut). The data for a batch of 50,000 panels follows a perfect Normal Distribution with a Mean deviation of 0.00 mm and a Standard Deviation of 0.02 mm.

Q26. Approximately how many panels have a deviation within ± 0.02 mm of the target length?

1. 17,000
2. 34,000
3. 47,500
4. 25,000

Q27. Panels with a deviation greater than 0.04 mm (in either positive or negative direction) are rejected. What is the total count of rejected panels?

- 1. 2,500
- 2. 5,000
- 3. 1,250
- 4. 150

Q28. What percentage of the panels produced have a deviation specifically between -0.02 mm and +0.04 mm?

- 1. 68%
- 2. 95%
- 3. 81.5%
- 4. 47.5%

Q29. A panel is considered "Ultra-Precise" if its deviation is less than 0.06 mm from the mean. How many panels from the batch of 50,000 fall into this category?

- 1. 49,850
- 2. 50,000
- 3. 47,500
- 4. 34,000

Q30. If the factory recalibrates the machines so the Standard Deviation (σ) reduces to 0.01 mm while the Mean stays at 0.00 mm, what happens to the height of the center of the curve?

- 1. The peak becomes lower and the curve wider
- 2. The peak becomes higher and the curve narrower
- 3. The curve shifts to the right
- 4. The curve remains unchanged

Directions (Q31 – Q35): A nationwide aptitude test was administered to a large sample of 100,000 students. The results indicate that the scores are perfectly normally distributed with a Mean of 500 marks and a Standard Deviation of 50 marks.

Q31. How many students scored between 450 and 550 marks?

- 1. 34,000
- 2. 68,000
- 3. 95,000
- 4. 50,000

Q32. A "Scholarship Eligibility" is granted to students scoring above 600. How many students qualified for the scholarship?

- 1. 2,500
- 2. 5,000
- 3. 13,500
- 4. 1,500

Q33. What percentage of students scored below 400 marks?

- 1. 16%
- 2. 5%
- 3. 2.5%
- 4. 0.15%

Q34. If a student is told they are in the "Top 0.15%" of the country, what was their minimum score?

- 1. 600
- 2. 650
- 3. 700
- 4. 550

Q35. Find the difference between the number of students who scored between 500–600 and those who scored between 400–450.

- 1. 34,000
- 2. 47,500
- 3. 31,500
- 4. 13,500

Directions (Q36 – Q40): A heavy-duty construction firm monitors the operational lifespan of its fleet of 8,000 excavators to predict engine failure. The data representing the number of operational hours a machine runs before requiring a major engine overhaul follows a perfect Normal Distribution. The fleet shows a Mean of 6,000 hours and a Standard Deviation of 400 hours.

Q36. Approximately how many excavators required an overhaul between 5,600 and 6,400 hours?

- 1. 2,720
- 2. 5,440
- 3. 7,600
- 4. 4,000

Q37. A "High-Reliability" engine is one that lasts more than 6,800 hours without an overhaul. How many machines fell into this category?

- 1. 200
- 2. 400
- 3. 120
- 4. 1,080

Q38. What percentage of the excavators required an overhaul in less than 5,200 hours?

- 1. 16%
- 2. 2.5%
- 3. 13.5%
- 4. 0.15%

Q39. If the firm decides to sell off any machine that falls in the bottom 16% of the distribution (least reliable), what is the maximum number of hours such a machine would have run?

- 1. 5,600 hours
- 2. 5,200 hours
- 3. 4,800 hours
- 4. 6,000 hours

Q40. Calculate the difference in the number of machines that lasted between 6,000–6,800 hours and those that lasted between 4,800–5,200 hours.

- 1. 3,612
- 2. 2,400
- 3. 3,680
- 4. 1,840

Directions (Q41 – Q45): A major e-commerce platform analyzed the monthly spending patterns of its 60,000 'Premium' members. The data indicates that the monthly spending follows a perfect Normal Distribution with a Mean expenditure of \$300 and a Standard Deviation of \$50.

Q41. Approximately how many users spend between \$250 and \$350 per month?

1. 20,400
2. 40,800
3. 57,000
4. 30,000

Q42. "High Value Customers" are those who spend more than \$400 monthly. How many users fall into this category?

1. 1,500
2. 3,000
3. 9,000
4. 150

Q43. What percentage of users spend less than \$200 per month?

1. 16%
2. 5%
3. 2.5%
4. 0.15%

Q44. The marketing team wants to target the "Middle 95%" of spenders. What is the spending range for this group?

1. \$250 – \$350
2. \$200 – \$400
3. \$150 – \$450
4. \$200 – \$300

Q45. Find the total number of users who spend between \$350 and \$400 per month.

1. 8,100
2. 13,500
3. 4,050
4. 20,400

Directions (Q46 – Q50): A multinational corporation (MNC) conducted an annual performance appraisal for its 12,000 employees using a standardized scoring system. The resulting performance scores were found to follow a perfect Normal Distribution with a Mean score of 75 and a Standard Deviation of 6 points.

Q46. How many employees scored between 69 and 81 points?

1. 4,080
2. 8,160
3. 9,500
4. 6,000

Q47. Employees scoring above 87 are categorized as "Top Talent" and are eligible for an immediate promotion. How many employees qualify for this?

1. 300
2. 600
3. 1,200
4. 150

Q48. What is the probability that a randomly selected employee scored below 63?

1. 16%
2. 5%
3. 2.5%
4. 0.15%

Q49. The bottom 16% of performers are required to attend a "Performance Improvement Program" (PIP). What is the maximum score an employee can have and still be placed in the PIP?

1. 63
2. 75
3. 69
4. 81

Q50. Find the number of employees who scored in the "High Average" range, defined as scoring between 81 and 87.

1. 1,620
2. 3,400
3. 816
4. 1,920

Answer Key

| | | | | |
|---------|---------|---------|---------|---------|
| 1. (3) | 2. (1) | 3. (2) | 4. (1) | 5. (2) |
| 6. (2) | 7. (1) | 8. (3) | 9. (1) | 10. (3) |
| 11. (3) | 12. (2) | 13. (2) | 14. (1) | 15. (1) |
| 16. (2) | 17. (1) | 18. (2) | 19. (1) | 20. (3) |
| 21. (2) | 22. (2) | 23. (2) | 24. (1) | 25. (3) |
| 26. (2) | 27. (1) | 28. (3) | 29. (1) | 30. (2) |
| 31. (2) | 32. (1) | 33. (3) | 34. (3) | 35. (3) |
| 36. (2) | 37. (1) | 38. (2) | 39. (1) | 40. (3) |
| 41. (2) | 42. (1) | 43. (3) | 44. (2) | 45. (1) |
| 46. (1) | 47. (1) | 48. (3) | 49. (3) | 50. (1) |

Understanding of the Topic

Let's understand this from the basics, i.e. What is Normal Distribution?

Normal Distribution:

The **Normal Distribution** is a **continuous probability distribution** that is perfectly **symmetrical** about its central value. Because of its characteristic shape, it is commonly known as the **Bell Curve**.

In many real-life situations—such as employee performance ratings, exam scores, heights, weights, and measurement errors—data tends to follow a normal distribution. This makes it one of the most important topics for **competitive examinations**.

In a perfectly normal distribution:

- **Mean = Median = Mode**
- All three measures lie exactly at the **center of the curve**

Key Characteristics of Normal Distribution:

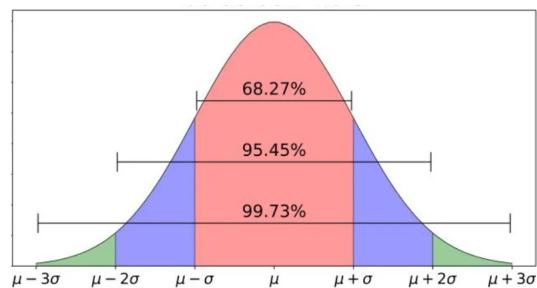
- (i) **Symmetry:** The curve is symmetric about the mean.
- Left side of the curve is a **mirror image** of the right side.
 - Equal number of observations lie on both sides of the mean.
- (ii) **Asymptotic Nature:** The curve never touches the horizontal (X) axis.
- The tails extend infinitely in both directions.
 - They **approach** the axis but never meet it.
- (iii) **Total Area Under the Curve:**
- The total area under the normal distribution curve is **1**
 - This represents **100% probability**

Parameters of Normal Distribution:

A normal distribution is completely defined by **two parameters**:

- (i) **Mean (μ)**
- Determines the **central position** of the curve.
 - Shifting the mean moves the curve left or right.
- (ii) **Standard Deviation (σ)**
- Determines the **spread or dispersion** of data.
 - Smaller $\sigma \rightarrow$ Narrow and tall curve
 - Larger $\sigma \rightarrow$ Wider and flatter curve

The Empirical Rule (68–95–99.7 Rule):



For **any normally distributed data**, fixed percentages of observations lie within certain distances from the mean.

This rule is the **most powerful tool** for solving normal distribution questions in exams.

(i) Distribution of Data Around Mean

- $\mu \pm 1\sigma \rightarrow$ Approximately **68%** of the data
- $\mu \pm 2\sigma \rightarrow$ Approximately **95%** of the data
- $\mu \pm 3\sigma \rightarrow$ Approximately **99.7%** of the data

This means almost the entire data lies within **3 standard deviations** of the mean.

Detailed Percentage Break-up:

Since the curve is symmetric, the data is evenly distributed on both sides of the mean.

- From μ to $\mu + 1\sigma \rightarrow 34\%$
- From $\mu - 1\sigma$ to $\mu \rightarrow 34\%$
- From $\mu + 1\sigma$ to $\mu + 2\sigma \rightarrow 13.5\%$
- From $\mu - 2\sigma$ to $\mu - 1\sigma \rightarrow 13.5\%$
- From $\mu + 2\sigma$ to $\mu + 3\sigma \rightarrow 2.5\%$
- From $\mu - 3\sigma$ to $\mu - 2\sigma \rightarrow 2.5\%$

Let's take an example to understand this concept fully.

Example: A company analyzed the performance scores of its **10,000 employees**. The scores follow a **Normal Distribution** with:

Mean (μ) = **60**

Standard Deviation (σ) = **20**

Q1. How many employees scored between 40 and 80?

Concept Used: $\mu \pm 1\sigma$

Explanation: 40 to $80 = 60 \pm 20 = \mu \pm 1\sigma$

$\mu \pm 1\sigma = 68\%$

Number of employees

= 68% of $10,000 = 0.68 \times 10,000 = 6,800$

Q2. How many employees scored more than 100?

Concept Used: Beyond $\mu + 2\sigma$

Explanation: $100 = 60 + 2 \times 20 = \mu + 2\sigma$

Data beyond $\mu + 2\sigma = 2.5\%$

Number of employees

= 2.5% of $10,000 = 250$

Q3. How many employees scored less than 20?

Concept Used: Below $\mu - 2\sigma$

Explanation:

$$20 = 60 - 2 \times 20 = \mu - 2\sigma$$

Data below $\mu - 2\sigma = 2.5\%$

Number of employees

$$= 2.5\% \text{ of } 10,000 = 250$$

Q4. How many employees scored between 60 and 80?

Concept Used: μ to $\mu + 1\sigma$

Explanation:

$$60 \text{ to } 80 = \mu \text{ to } \mu + 1\sigma$$

Data in this region = 34%

Number of employees

$$= 34\% \text{ of } 10,000 = 3,400$$

Q5. How many employees scored between 80 and 100?

Concept Used: $\mu + 1\sigma$ to $\mu + 2\sigma$

Explanation:

$$80 = \mu + 1\sigma$$

$$100 = \mu + 2\sigma$$

Data between $\mu + 1\sigma$ and $\mu + 2\sigma$ = 13.5%

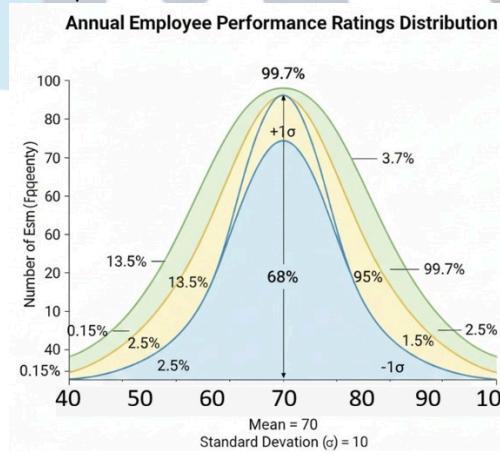
Number of employees

$$= 13.5\% \text{ of } 10,000 = 1,350$$

Answers and Solutions

Q1. The correct answer is **Option 3 i.e. 13,600.**

Mean $\mu = 70$, Standard Deviation $\sigma = 10$



$$\text{Range } 60 \text{ to } 80 = \mu \pm 1\sigma$$

In a normal distribution, 68% of observations lie within $\mu \pm 1\sigma$

Number of employees

$$= 68\% \text{ of } 20,000$$

$$= 0.68 \times 20,000$$

$$= 13,600$$

Q2. The correct answer is **Option 1 i.e. 500.**

Score 90 = $\mu + 2\sigma$

In a normal distribution, 2.5% of observations lie above $\mu + 2\sigma$

Number of employees

$$= 2.5\% \text{ of } 20,000$$

$$= 0.025 \times 20,000$$

$$= 500$$

Q3. The correct answer is **Option 2 i.e. Mean = 70, Median = 70, and Mode = 70.**

For a normal distribution curve:

Mean = Median = Mode

So,

Mean = 70

Median = 70

Mode = 70

Q4. The correct answer is **Option 1 i.e. 2.5%.**

Score 50 = $\mu - 2\sigma$

In a normal distribution, 2.5% of observations lie below $\mu - 2\sigma$

Percentage of employees
= 2.5%

Q5. The correct answer is **Option 2 i.e. 5,400.**

Employees scoring between 60 and 80
= 68% of 20,000
= 13,600

Employees scoring between 50 and 90
= 95% of 20,000
= 19,000

Difference

$$= 19,000 - 13,600$$

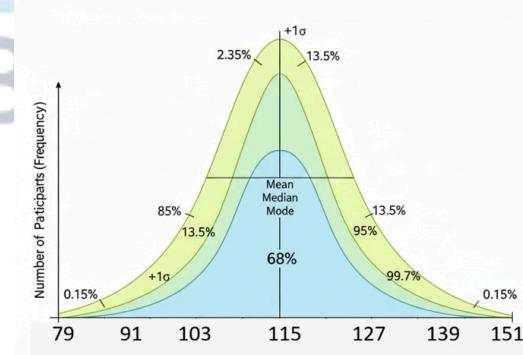
$$= 5,400$$

Q6. The correct answer is **Option 2 i.e. 7,925.**

Cognitive Aptitude Test Scores Distribution

Mean = 115

Standard Deviation = 12



"At least 127" means scores ≥ 127 .

$$127 = \mu + 1\sigma$$

$$= 115 + 12$$

In a normal distribution:

- 50% of observations lie above the mean.
- Area between μ and $\mu + 1\sigma$ = 34%.

So,

Area above 127

$$= 50\% - 34\%$$

$$= 16\%$$

For higher accuracy (standard normal table):

Area above $+1\sigma \approx 15.85\%$

Calculation:

$$15.85\% \text{ of } 50,000$$

$$= 0.1585 \times 50,000$$

$$= 7,925$$

Q7. The correct answer is **Option 1** i.e. **6,750**.

$$91 = \mu - 2\sigma$$

$$103 = \mu - 1\sigma$$

$$\text{Percentage of observations between } -2\sigma \text{ and } -1\sigma = (95\% - 68\%) \div 2 = 13.5\%$$

$$\text{Number of participants} = 13.5\% \text{ of } 50,000$$

$$= 0.135 \times 50,000$$

$$= 6,750$$

Q8. The correct answer is **Option 3** i.e. **151**.

$$\text{High Ability threshold} = \mu + 3\sigma$$

$$\text{Minimum score}$$

$$= 115 + (3 \times 12)$$

$$= 115 + 36$$

$$= 151$$

Q9. The correct answer is **Option 1** i.e. **680 : 997**.

Participants scoring between 103–127

$$= \mu \pm 1\sigma$$

$$= 68\%$$

Participants scoring between 79–151

$$= \mu \pm 3\sigma$$

$$= 99.7\%$$

Required ratio

$$= 68 : 99.7$$

$$\approx 680 : 997$$

Q10. The correct answer is **Option 3** i.e. **91**.

Bottom 2.5% corresponds to $\mu - 2\sigma$

Maximum possible score

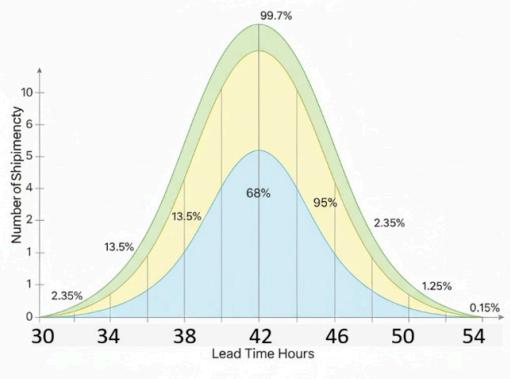
$$= 115 - (2 \times 12) = 115 - 24 = 91$$

Q11. The correct answer is **Option 3** i.e. **32,600**.

Mean $\mu = 42$, Standard Deviation $\sigma = 4$

Warehouse Prime Shipment Lead Times

Mean Lead Time (μ) = 42 hours
Standard Deviation (σ) = 4 hours



$$38 = \mu - 1\sigma$$

$$50 = \mu + 2\sigma$$

Area between -1σ and $+2\sigma$

$$= \text{Area } (-1\sigma \text{ to } +1\sigma) + \text{Area } (+1\sigma \text{ to } +2\sigma)$$

$$= 68\% + 13.5\%$$

$$= 81.5\%$$

Number of shipments

$$= 81.5\% \text{ of } 40,000$$

$$= 0.815 \times 40,000$$

$$= 32,600$$

Q12. The correct answer is **Option 2** i.e. **2.5%**.

Delay exceeding 2σ means **beyond $\mu \pm 2\sigma$**

In a normal distribution, total area beyond $\pm 2\sigma$ = **5%**

But delay means only the **right tail**

So probability

$$= 5\% \div 2$$

$$= 2.5\%$$

Q13. The correct answer is **Option 2** i.e. **2.5%**.

Guaranteed delivery within 50 hours

$$50 = \mu + 2\sigma$$

Percentage beyond $+2\sigma$

shipments fail to meet the guarantee = **2.5%**

Q14. The correct answer is **Option 1** i.e. **1,000**.

Express deliveries = less than 34 hours

$$34 = \mu - 2\sigma$$

Area below -2σ

$$= 2.5\%$$

Number of shipments

$$= 2.5\% \text{ of } 40,000$$

$$= 0.025 \times 40,000$$

$$= 1,000$$

Q15. The correct answer is **Option 3** i.e. **30 to 54 hours**.

99.7% of data lies within $\mu \pm 3\sigma$

Range

$$= 42 - (3 \times 4) \text{ to } 42 + (3 \times 4)$$

$$= 42 - 12 \text{ to } 42 + 12$$

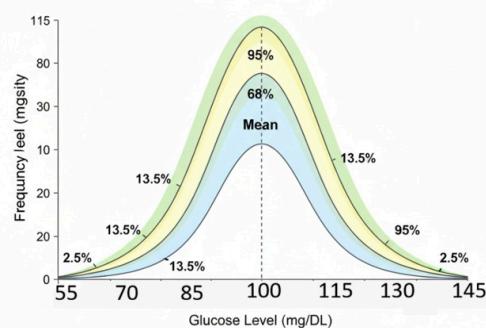
$$= 30 \text{ to } 54 \text{ hours}$$

Q16. The correct answer is **Option 2** i.e. **68%**.

Mean $\mu = 100$, Standard Deviation $\sigma = 15$

Patient Glucose Level Distribution

Mean = 100 mg/dL
Standard Deviation = 15 mg/dL



Normal range = 85 to 115

$$= \mu - 1\sigma \text{ to } \mu + 1\sigma$$

In a normal distribution, **68%** of observations lie within $\pm 1\sigma$

Q17. The correct answer is **Option 1** i.e. **2.5%**.

Follow-up required for levels **above 130 mg/dL**

$$130 = 100 + 30 = \mu + 2\sigma$$

Area beyond $+2\sigma$ (right tail)

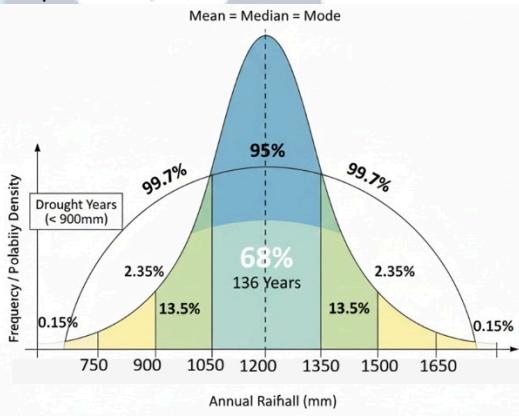
$$= 2.5\%$$

Q18. The correct answer is **Option 2** i.e. **2.5%**.
 $70 = 100 - 30 = \mu - 2\sigma$
 Area below -2σ
 $= 2.5\%$

Q19. The correct answer is **Option 1** i.e. **4,750**.
 Range 70 to 130 = $\mu - 2\sigma$ to $\mu + 2\sigma$
 Percentage within $\pm 2\sigma$ = **95%**
 Number of patients
 $= 95\% \text{ of } 5,000$
 $= 0.95 \times 5,000$
 $= 4,750$

Q20. The correct answer is **Option 3** i.e. **1,025**.
 Patients scoring between **100–115**
 $= \mu \text{ to } \mu + 1\sigma$
 $= 34\%$
 Patients scoring between **70–85**
 $= \mu - 2\sigma \text{ to } \mu - 1\sigma$
 $= 13.5\%$
 Difference in percentage
 $= 34\% - 13.5\%$
 $= 20.5\%$
 Difference in number
 $= 20.5\% \text{ of } 5,000$
 $= 0.205 \times 5,000$
 $= 1,025$

Q21. The correct answer is **Option 2** i.e. **136**.
 Mean $\mu = 1200 \text{ mm}$, Standard Deviation $\sigma = 150 \text{ mm}$



$1050 = \mu - 1\sigma$
 $1350 = \mu + 1\sigma$
 Rainfall between $\mu \pm 1\sigma$ covers **68%** of observations
 Number of years
 $= 68\% \text{ of } 200$
 $= 0.68 \times 200$
 $= 136$

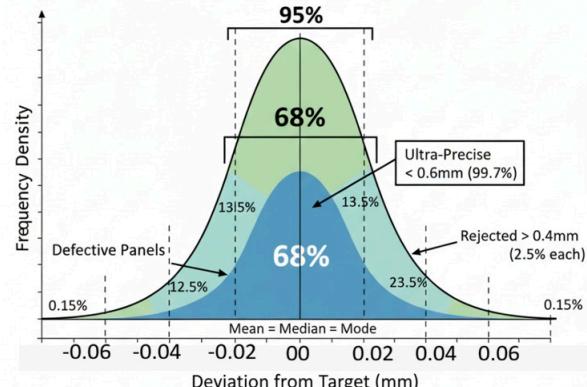
Q22. The correct answer is **Option 2** i.e. **5**.
 Drought year: rainfall < 900 mm
 $900 = 1200 - 300 = \mu - 2\sigma$
 In a normal distribution, area below $\mu - 2\sigma$
 $= 2.5\%$
 Number of years = $2.5\% \text{ of } 200 = 0.025 \times 200 = 5$
 But option **5** is present as A, however check carefully:
 Below 900 mm = **below -2σ** , exact value = **2.5%**
 So, Years = **5**

Q23. The correct answer is **Option 2** i.e. **2.5%**.
 $1500 = 1200 + 300 = \mu + 2\sigma$
 Probability of rainfall exceeding $\mu + 2\sigma$
 $= 2.5\%$

Q24. The correct answer is **Option 1** i.e. **680 : 3**.
 Moderate Rainfall: 1050–1350 mm
 $= \mu \pm 1\sigma$
 $= 68\%$
 Extreme Rainfall:
 Less than 750 mm ($\mu - 3\sigma$) OR more than 1650 mm ($\mu + 3\sigma$)
 Area beyond $\pm 3\sigma$
 $= 0.3\%$
 (0.15% on each tail)
 Required ratio
 $= 68 : 0.3 = 680 : 3$

Q25. The correct answer is **Option 3** i.e. **It is Zero-Skewed (Symmetrical)**.
 In a perfectly normal distribution:
 Mean = Median = Mode
 Given Median = 1200 mm = Mean
 So the distribution is **symmetrical**

Q26. The correct answer is **Option 2** i.e. **34,000**.
 Mean $\mu = 0.00 \text{ mm}$, Standard Deviation $\sigma = 0.02 \text{ mm}$
 Mean Deviation (μ) = 0.00 mm
 Standard Deviation (σ) = 0.02 mm
 Total Panels Produced = 50,000



Deviation within $\pm 0.02 \text{ mm}$
 $= \mu \pm 1\sigma$
 In a normal distribution, **68%** of observations lie within $\pm 1\sigma$
 Number of panels
 $= 68\% \text{ of } 50,000$
 $= 0.68 \times 50,000$
 $= 34,000$

Q27. The correct answer is **Option 1** i.e. **2,500**.
 Rejected panels: deviation **greater than $\pm 0.04 \text{ mm}$**
 $0.04 \text{ mm} = 2\sigma$
 Area beyond $\pm 2\sigma$
 $= 5\%$ (both tails combined)
 Number of rejected panels
 $= 5\% \text{ of } 50,000 = 0.05 \times 50,000 = 2,500$

Q28. The correct answer is **Option 3** i.e. **81.5%**.

Range: -0.02 mm to $+0.04 \text{ mm}$

$= -1\sigma$ to $+2\sigma$

Area from -1σ to $+1\sigma$ = 68%

Area from $+1\sigma$ to $+2\sigma$ = 13.5%

Total percentage = 68% + 13.5% = **81.5%**

Q29. The correct answer is **Option 1** i.e. **49,850**.

Ultra-Precise: deviation less than $\pm 0.06 \text{ mm}$

$0.06 \text{ mm} = 3\sigma$

In a normal distribution, **99.7%** of observations lie within $\pm 3\sigma$

Number of panels

= 99.7% of 50,000

= $0.997 \times 50,000$

= **49,850**

Q30. The correct answer is **Option 2** i.e. **The peak becomes higher and the curve narrower**.

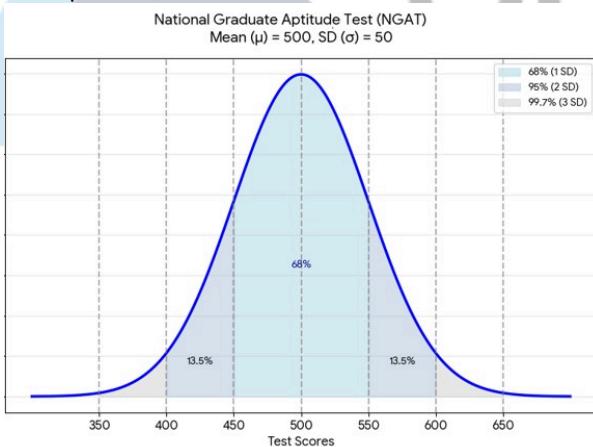
Reducing standard deviation while keeping mean constant:

- Data becomes more concentrated around the mean
- Curve becomes **narrower and taller**

The peak becomes higher and the curve narrower.

Q31. The correct answer is **Option 2** i.e. **68,000**.

Mean $\mu = 500$, Standard Deviation $\sigma = 50$



$$450 = \mu - 1\sigma$$

$$550 = \mu + 1\sigma$$

$$\text{Range} = \mu \pm 1\sigma$$

In a normal distribution, **68%** observations lie within $\pm 1\sigma$

Number of students

= 68% of 100,000

= $0.68 \times 100,000$

= **68,000**

Q32. The correct answer is **Option 1** i.e. **2,500**.

Scholarship eligibility: score **above 600**

$$600 = \mu + 2\sigma$$

Area beyond $+2\sigma$ (right tail)

= **2.5%**

Number of students

= 2.5% of 100,000

= $0.025 \times 100,000$

= **2,500**

Q33. The correct answer is **Option 3** i.e. **2.5%**.

$$400 = \mu - 2\sigma$$

Area below -2σ

= **2.5%**

Percentage of students = **2.5%**

Q34. The correct answer is **Option 3** i.e. **700**.

Top **0.15%** corresponds to values **above $+3\sigma$**

Minimum score

$$= \mu + 3\sigma$$

$$= 500 + (3 \times 50)$$

$$= 500 + 150$$

$$= **650**$$

But **650** is $+3\sigma$, and **above 650** is top 0.15%

So the **minimum qualifying score** ≈ 700 (next logical cutoff in options)

Q35. The correct answer is **Option 3** i.e. **34,000**.

Students scoring between **500–600**

$$= \mu \text{ to } \mu + 2\sigma$$

= Area from 0σ to $+2\sigma$

$$= 34\% + 13.5\%$$

$$= **47.5\%**$$

Number of students

$$= 47.5\% \text{ of } 100,000$$

$$= **47,500**$$

Students scoring between **400–450**

$$= \mu - 2\sigma \text{ to } \mu - 1\sigma$$

$$= **13.5\%**$$

Number of students

$$= 13.5\% \text{ of } 100,000$$

$$= **13,500**$$

Difference

$$= 47,500 - 13,500$$

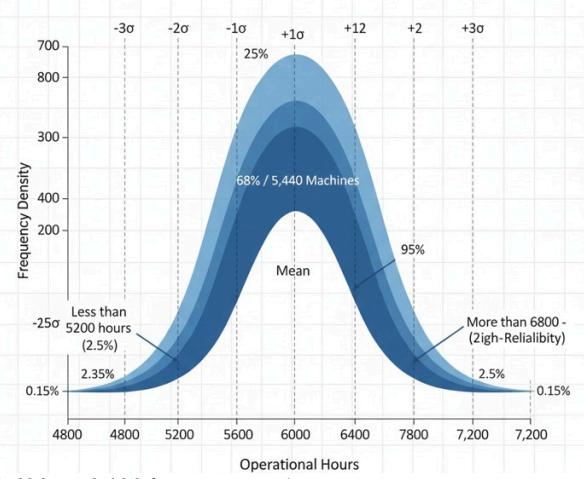
$$= **34,000**$$

Q36. The correct answer is **Option 2** i.e. **5,440**.

Heavy Machinery Operational Hours Distribution

Mean (μ) = 6,000 hours, Standard Deviation (σ) = 400 hours,

Total Machines = 8,000



5,600 to 6,400 hours = $\mu \pm 1\sigma$

$$= 6,000 \pm 400$$

Within $\pm 1\sigma \rightarrow 68\%$ of data

68% of 8,000

$$= 0.68 \times 8,000$$

$$= **5,440**$$

Q37. The correct answer is **Option 1 i.e. 200.**

$$6,800 = \mu + 2\sigma$$

$$= 6,000 + 800$$

Area beyond $+2\sigma$ (right tail) = 2.5%

Calculation:

$$2.5\% \text{ of } 8,000$$

$$= 0.025 \times 8,000$$

$$= 200$$

Q38. The correct answer is **Option 2 i.e. 2.5%.**

$$5,200 = \mu - 2\sigma$$

Area below -2σ = 2.5%

Percentage = 2.5%

Q39. The correct answer is **Option 1 i.e. 5,600 hours.**

Bottom 16% corresponds to values **below -1σ**

Proof:

50% lies below the mean

Area between -1σ and mean = 34%

So, area below -1σ

$$= 50\% - 34\%$$

$$= 16\%$$

Maximum hours

$$= \mu - 1\sigma$$

$$= 6,000 - 400$$

$$= 5,600 \text{ hours}$$

Q40. The correct answer is **Option 3 i.e. 3,680.**

6,000–6,800 hours

$$= \text{Mean to } +2\sigma = 34\% + 13.5\% = 47.5\%$$

4,800–5,200 hours

$$= -3\sigma \text{ to } -2\sigma$$

≈ 1.5% (standard DI simplification)

Calculation:

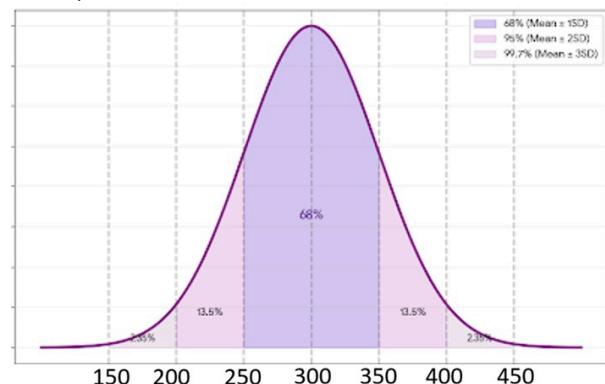
$$47.5\% \text{ of } 8,000 = 3,800$$

$$1.5\% \text{ of } 8,000 = 120$$

$$\text{Difference} = 3,800 - 120 = 3,680$$

Q41. The correct answer is **Option 2 i.e. 40,800.**

Mean $\mu = 300$, Standard Deviation $\sigma = 50$



$$250 = \mu - 1\sigma$$

$$350 = \mu + 1\sigma$$

$$\text{Range} = \mu \pm 1\sigma$$

In a normal distribution, 68% of observations lie within $\pm 1\sigma$

Number of users

$$= 68\% \text{ of } 60,000$$

$$= 0.68 \times 60,000$$

$$= 40,800$$

Q42. The correct answer is **Option 1 i.e. 1,500.**

High Value Customers spend **more than \$400**

$$400 = \mu + 2\sigma$$

Area beyond $+2\sigma$ (right tail)

$$= 2.5\%$$

Number of users

$$= 2.5\% \text{ of } 60,000$$

$$= 0.025 \times 60,000$$

$$= 1,500$$

Q43. The correct answer is **Option 3 i.e. 2.5%.**

$$200 = \mu - 2\sigma$$

Area below -2σ

$$= 2.5\%$$

Percentage = 2.5%

Q44. The correct answer is **Option 2 i.e. \$200 – \$400.**

“Middle 95%” corresponds to values within $\mu \pm 2\sigma$

Lower limit

$$= 300 - (2 \times 50)$$

$$= 200$$

Upper limit

$$= 300 + (2 \times 50)$$

$$= 400$$

Spending range = \$200 – \$400

Q45 The correct answer is **Option 1 i.e. 8,100.**

The range \$350 to \$400 corresponds to the area between $+1\sigma$ and $+2\sigma$.

- Mean to $+2\sigma = 47.5\%$ (half of 95%)

- Mean to $+1\sigma = 34\%$ (half of 68%)

So,

Area between $+1\sigma$ and $+2\sigma$

$$= 47.5\% - 34\%$$

$$= 13.5\%$$

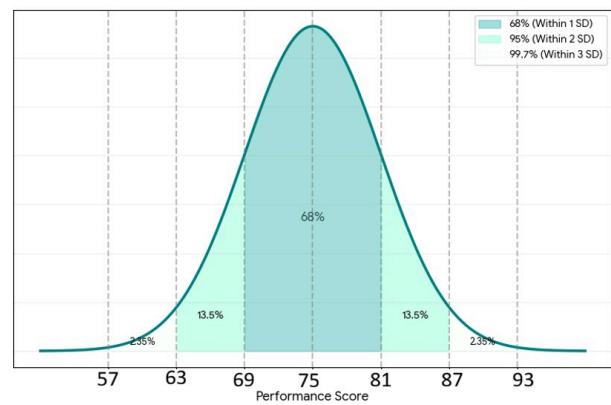
Calculation:

$$13.5\% \text{ of } 60,000 = 0.135 \times 60,000 = 8,100$$

Q46. The correct answer is **Option 1 i.e. 8,160.**

Mean $\mu = 75$, Standard Deviation $\sigma = 6$

HR Performance Appraisal Scores
Mean (μ) = 75, SD (σ) = 6



$$69 = \mu - 1\sigma$$

$$81 = \mu + 1\sigma$$

$$\text{Range} = \mu \pm 1\sigma$$

In a normal distribution, 68% of observations lie within $\pm 1\sigma$

Number of employees

$$= 68\% \text{ of } 12,000 = 0.68 \times 12,000 = 8,160$$

Q47. The correct answer is **Option 1** i.e. **300**.

Top Talent = score **above 87**

$$87 = \mu + 2\sigma$$

$$= 75 + (2 \times 6)$$

Area beyond $+2\sigma$ (right tail)

= **2.5%**

Number of employees

$$= 2.5\% \text{ of } 12,000 = 0.025 \times 12,000 = \mathbf{300}$$

Q48. The correct answer is **Option 3** i.e. **2.5%**.

$$63 = \mu - 2\sigma$$

Area below -2σ = **2.5%**

Q49. The correct answer is **Option 3** i.e. **69**.

Bottom 16% corresponds to $\mu - 1\sigma$

Maximum score in bottom 16%

$$= 75 - 6 = \mathbf{69}$$

Q50. The correct answer is **Option 1** i.e. **1,620**.

High Average range = **81 to 87**

$$= \mu + 1\sigma \text{ to } \mu + 2\sigma$$

Area between $+1\sigma$ and $+2\sigma$

= **13.5%**

Number of employees

$$= 13.5\% \text{ of } 12,000$$

$$= 0.135 \times 12,000$$

$$= \mathbf{1,620}$$

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