**Chapter** 𝐍𝐨. **3**

𝐏𝐫𝐨𝐛𝐥𝐞𝐦 𝐨𝐧 𝐀𝐯𝐞𝐫𝐚𝐠𝐞 ∶

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| 1. David obtained 76, 65, 82, 67, and 85 marks (out of 100) in English, Mathematics, Physics, Chemistry and Biology. What are his average marks? | | | | | | | |
| A | 65 | B | 69 | C | 72 | **D** | **75** |
| 2. In Arun′s opinion, his weight is greater than 65 kg but less than 72 kg. His brother does not agree with Arun and he thinks that Arun’s weight is greater than 60 kg but less than 70 kg. His mother’s view is that his weight cannot be greater than 68 kg. If all of them are correct in their estimation, what is the average of different probable  weights of Arun? | | | | | | | |
| **A** | **67 kg** | B | 68 kg | C | 69 kg | D | None of these |
| 3. The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero ? | | | | | | | |
| A | 0 | B | 1 | C | 10 | **D** | **19** |
| 4. Find the average of all the numbers between 6 and 34 which are divisible by 5. | | | | | | | |
| A | 18 | **B** | **20** | C | 24 | D | 30 |
| 5. The average of the first nine prime numbers is: | | | | | | | |
| A | 9 | B | 11 | **C** | **11 1**  **9** | D | 11 2  9 |
| 6. A student was asked to find the arithmetic mean of the numbers 3, 11, 7, 9, 15, 13, 8, 19, 17, 21, 14 and x. He found the mean to be 12. What should be the number in place of x? | | | | | | | |
| A | 3 | **B** | **7** | C | 17 | D | 31 |
| 7. The average of 2, 7, 6 and x is 5 and the average of 18, 1, 6, x and y is 10. What is the value of y ? | | | | | | | |
| A | 5 | B | 10 | **C** | **20** | D | 30 |
| 8. If the mean of 5 observations x, x + 2, x + 4, x + 6 and x + 8 is 11, then the mean of the last three observations is | | | | | | | |
| A | 11 | **B** | **13** | C | 15 | D | 17 |
| 9. If the mean of a, b, c, is M and ab + bc + ca = 0, then the maen of a2, b2, c2 is: | | | | | | | |
| A | M2 | **B** | **3M2** | C | 6M2 | D | 9M2 |
| 10. The average of the two digit numbers, which remain the same when the digits interchange their positions, is: | | | | | | | |
| A | 33 | B | 44 | **C** | **55** | D | 66 |
| 11. The average of a non − zero number and its square is 5 times the number. The number is: | | | | | | | |
| **A** | **9** | B | 17 | C | 29 | D | 295 |
| 12. The average of five consecutive odd numbers is 61. What is the difference between the highest and lowest number? | | | | | | | |
| A | 2 | B | 5 | **C** | **8** | D | None of these |

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| 13. The sum of three consecutive odd numbers is 38 more than the average of these numbers. What is the first of these numbers? | | | | | | | |
| A | 13 | **B** | **17** | C | 19 | D | None of these |
| 14. The average annual income ( in Rs. ) of certain agricultural workers is S and that of other workers is T. The number Of agricultural workers is 11 times that of other workers. Then the average monthly income of all the workers is : | | | | | | | |
| A | S + T 2 | B | S + 11T 2 | C | 1 + T  11S | **D** | **11S + T**  **12** |
| 15. A family consists of grandparents, parents and three grandchildren. The average age of the grandparents is 67 years, that of the parents is 35 years and that of the grandchildren is 6 years. What is the average of the family? | | | | | | | |
| A | 28 4 years  7 | **B** | **31 5 years**  **7** | C | 32 1 years  7 | D | None of these |
| 16. A library has an average of 510 visitors on Sundays and 240 on other days. The average number of visitors per day in a month of 30 days beginning with a Sunday is: | | | | | | | |
| A | 250 | B | 276 | **C** | **280** | D | 285 |
| 17. A car owner buys petrol at Rs. 7.50, 8 and 8.50 per litre for three successive years. What approximately is the average cost per litre of petrol if he spends Rs. 4000 each year? | | | | | | | |
| **A** | **Rs. 7.98** | B | Rs. 8 | C | Rs. 8.50 | D | Rs. 9 |
| 18. The average of six numbers is x and the average of three of these is y. If the average of the remaining three is z, then: | | | | | | | |
| A | x = y + z | **B** | **2x = y + z** | C | x = 2y + 2z | D | None of these |
| 19. The average of 50 numbers is 30. If two numbers, 35 and 40 are discarded, then the average of the remaining numbers is nearly: | | | | | | | |
| A | 28.32 | B | 28.78 | C | 29.27 | **D** | **29.68** |
| 20. The average age of five numbers is 27. If one number is excluded, the average becomes 25. The excluded number is | | | | | | | |
| A | 25` | B | 27 | C | 30 | **D** | **35** |
| 21. The average age of 35 students in a class is 16 years. The average age of 21 students is 14. What is the average age of remaining 14 students ? | | | | | | | |
| A | 15 years | B | 17 years | C | 18 years | **D** | **19 years** |
| 22. 16 children are to be divided into two groups A and B of 10 and 6 children. The average percent marks obtained  by the children of group A is 75 and the average percent marks of all the 16 children is 76. What is the average percent marks of children of group B? | | | | | | | |
| A | 77 1  3 | **B** | **77 2**  **3** | C | 78 1  3 | D | 78 2  3 |
| 23. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and 15 as remainder. What is the smaller number ? | | | | | | | |
| A | 240 | **B** | **270** | C | 295 | D | 360 |

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| 24. The average of six numbers is 3.95. The average of two of them is 3.4, while the average of the other two is 3.85. What is the average of the remaining two numbers? | | | | | | | |
| A | 4.5 | **B** | **4.6** | C | 4.7 | D | 4.8 |
| 25. The average price of 10 books is Rs. 12 while the average price of 8 of these books is Rs. 11.75. Of the remaining two books, if the price of one book is 60% more than the price of the other, what is the price of each of these two books? | | | | | | | |
| A | Rs. 5, Rs. 7.50 | B | Rs. 8, Rs. 12 | **C** | **Rs. 10, Rs. 16** | D | Rs. 12, Rs. 14 |
| 26. The average of runs of a cricket player of 10 innings was 32. How many runs must he make in his next innings so as to increase his average of runs by 4? | | | | | | | |
| A | 2 | B | 4 | C | 70 | **D** | **76** |
| 27. A company produces on an average 4000 items per month for the first 3 months. How many items it must produce on an average per month over the next 9 months, to average 4375 items per month over the whole? | | | | | | | |
| **A** | **4500** | B | 4600 | C | 4680 | D | 4710 |
| 28. Of the three numbers, the first is twice the second and the second is twice the third. The average of the reciprocal of the numbers is 7 . The numbers are:  72 | | | | | | | |
| A | 16, 8, 4 | B | 20, 10, 5 | **C** | **24, 12, 6** | D | 36, 18, 9 |
| 29. Of the four numbers, whose average is 60, the first one − fourth of the sum of the last three. The first numbers is: | | | | | | | |
| A | 15 | B | 45 | **C** | **48** | D | 60.25 |
| 30. Of the three numbers, the average of the first and the second is greater than the average of the second and the third by 15. What is the difference between the first and third of the three numbers? | | | | | | | |
| A | 15 | B | 45 | C | 60 | **D** | **None of these** |
| 31. Average of ten positive numbers is x̅. If each numbers is increased by 10 % , then x̅: | | | | | | | |
| A | remains unchanged | B | may decrease | C | may increase | **D** | **is increased by 10 %** |
| 32. The mean of 50 observations was 36. It was found later that an observation 48 was wrongly taken as 23. The corrected new means is: | | | | | | | |
| A | 35.2 | 36.1 | 2 | **C** | **36.5** | D | 39.1 |
| 33. A pupil’s marks were wrongly entered as 83 instead of 63. Due to that the average marks for the class got increased by half. The number of pupils in the class is: | | | | | | | |
| A | 10 | B | 20 | **C** | **40** | D | 73 |
| 34. The average temperature of the town in the first four days of a months was 58 degrees. The average for the second , third, fourth and fifth days was 60 degrees. If the temperatures of the first and fifth days were in the ratio 7: 8, then what is the temperature on the fifth day? | | | | | | | |
| **A** | **64 degrees** | B | 62 degrees | C | 56 degrees | D | none of these |

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| 35. The average age of the mother and her six children is 12 years which is reduced by 5 years if the age the mother is excluded. How old is the mother? | | | | | | | |
| A | 40 years | **B** | **42 years** | C | 48 years | D | 50 years |
| 36. The average weight of 8 persons increases by 2.5 kg when a new person comes in place of one of them weighting 65 kg. What might be the weight of the new person? | | | | | | | |
| A | 76 kg | B | 76.5 kg | **C** | **85 kg** | D | None of these |
| 37. The average of the consecutive numbers is n. if the next two numbers are also included, the average will: | | | | | | | |
| A | remain the same | **B** | **increase by 1** | C | increase by 1.4 | D | increase by 2 |
| 38. The average age of a husband and his wife was 23 years at the time of their marriage. After five years they have a one year old child. The average age of the family now is: | | | | | | | |
| **A** | **19 years** | B | 23 years | C | 28.5 years | D | 29.3 years |
| 39. 3 years ago, the age of a family of 5 members was 17 years. A baby having been born, the average age of the family is the same today. The present age of the baby is: | | | | | | | |
| A | 1 year | B | 1 1 years  2 | **C** | **2 years** | D | 3 years |
| 40. A certain factory employed 600 men and 400 women and the average wage was Rs. 25.50 per day. If a woman got Rs. 5 less than a man, then what are their daily wages? | | | | | | | |
| A | M: Rs. 25, W: Rs. 20 | **B** | **M: Rs. 27.50, W: Rs. 22.50** | C | M: Rs. 30, W: Rs. 25 | D | M: Rs. 32.50, W: Rs. 27.50 |
| 41. The arithmetic mean of the scores of a group of students in a test was 52. The brightest 20% of them secured a mean score of 80 and the dullest 25% a mean score of 31. The mean score of remaining 55% is: | | | | | | | |
| A | 45 | B | 50 | **C** | **51.4 approx.** | D | 54.6 Approx. |
| 42. The average salary of all the workers in a workshop is Rs. 8000. The average salary of 7 technicians is Rs. 12000 and the average salary of the rest is Rs. 6000. The total number of workers in the workshop is ∶ | | | | | | | |
| A | 20 | **B** | **21** | C | 22 | D | 23 |
| 43. In an examination, a pupil’s average marks were 63 per paper. If he had obtained 20 more marks for his Geography paper and 2 more marks for his History paper, his average per paper would have been 65. How many papers were there in the examination? | | | | | | | |
| A | 8 | B | 9 | **C** | **11** | D | 12 |
| 44. The average age of students of a class is 15.8 years. The average age of boys in the class is 16.4 years and that of the Girls is 15.4 years. The ratio of the numbers of boys to the number of girls in the class is: | | | | | | | |
| A | 1:2 | **B** | **2:3** | C | 3:4 | D | 3:5 |