AVERAGE-2_CSAT_ANSWER_EXPLANATION

Answer 1: (a)
Total runs scored in first 30 overs = 30x6 = 180
Total Required runs = 400
Required run rate
$$= \frac{400-180}{50-30} = \frac{220}{20} = 11$$

Answer 2: (a)
Sum of n numbers will also be 0, so we can have atmost n-1 numbers negative and magnitude of the last number will be equal to the sum of all negative numbers.

Answer 3: (d)
We cannot find P using statement I & II

Answer 4: (a)
I.   A+B=100
A+A-10=100
A=55
II.   A+B =100
I alone is sufficient while II alone is not sufficient to answer the question.

Answer 5: (d)
Let the no. of wickets taken before last match is n
ATQ ,
$$\frac{28n+42}{n+8} = 28-1$$
$$28n+42 = 27(n+8)$$
$$n = 216-42 = 174$$

Answer 6: (c)
Change in total marks
= 60x50-40x50 = 1000
Let 'N' be number of candidates whose marks do not change.

Then,
(100+N) 50- (100+N) 45 = 1000
(100+N) 5 = 1000
5N = 500
N = 100
Total number of students who took exam
= 100 +50
= 150

Answer 7: (b)
Number of men in the group $= \frac{2}{15} x 120 = 16$

Number of women in the group
$$= \frac{9}{15} x 120 = 72$$

Number of boys $= \frac{4}{15} x 120 = 32$

Ratio of average age of men, women and boys
6 : 5 : 4
Sum of age of whole group $= \frac{146}{3}$ x 120
ATQ

$$6 \text{ x} 16 x + 5x72 x + 4x32 x = \frac{146}{3} x120$$

$$584 x == \frac{146}{3} x120$$

$$x = 10$$
Average age of women = 5x10 = 50 years

Answer 8: (a)

Average of first n odd numbers is n.

∴ Average of first 70 odd numbers = 70

Answer 9: (c)
B : A : C
3 : 2 : 1
A : B : C = 2 : 3 : 1
A has $\frac{2}{2+3+1} x 40 x 3 = 40$

Answer 10: (d)
New average = 9x11 =99

Answer 11: (a)
Average cost of chair $= \frac{20010-1350 x7}{12}$

$$= \frac{20010 - 9450}{12} = ₹880$$

$$= \frac{431}{10} = 43.1 kg$$

Answer 12: (d)

Prime numbers between 50 and 70 are 53, 59, 61, 67

required average

$$= \frac{53 + 59 + 61 + 67}{4} = \frac{240}{4} = 60$$

Answer 13: (d)

Total score of 3 tests = 3N

Score in 4th test = N + 20

New average

$$= \frac{3N + N + 20}{4} = N + 5$$

Answer 14: (b)

Numbers are N-6, N-4, N-2, N, N+2, N+4, N+6

N = 42

Smallest number

= N-6 = 42-6=36

Answer 15: (a)

Average of remaining numbers

$$= \frac{21 \times 20 - 35 \times 6}{20 - 6} = 15$$

Statement I is correct

II. Average

$$= \frac{121 + 145 + 178 + 214 + 213}{5} = 174.2$$

Statement II is incorrect

Answer 16: (d)

Let four consecutive odd numbers are N-2, N, N+2, N+4

ATQ

$$\frac{(N-2)^2 + N^2 + (N+2)^2 + (N+4)^2}{4} = 201$$

$$\frac{4N^2 + 8N + 24}{4} = 201$$

$N^2 + 2N - 195 = 0$

$(N+15)(N-13) = 0$

N = 13

5 times of the largest number = 5 x (13+4) = 85

Answer 17: (b)

Required average

$$= \frac{5x45 + 3x42 + 2x40}{5 + 3 + 2}$$

Answer 18: (c)

If N is the average of seven consecutive odd numbers then numbers will be N-6, N-4, N-2, N, N+2, N+4 and N+6

If 3 more numbers are added then 3 new no. will be N+8, N+10, N+12

New average $= \frac{N+2+N+4}{2} = N+3$

Difference = (N+3) −N = 3

Answer 19: (c)

Required average

$$= \frac{xy^2 + yx^2}{x+y} = xy$$

Answer 20: (d)

8th result

= 15x16 − 7 x13-7x18=240-91-126

=240-217=23