Quiz Date: $16^{\text {th }}$ September 2020
Q1. If the average of 5 odd consecutive natural number is 11 . then find out the average of largest and smallest odd number?
(a) 13
(b) 12
(c) 15
(d) 17
(e) 11

Q2. $(15423 \times 15425+x)$ be a perfect square number, where x is least possible natural number then find out value of $x$ ?
(a) 4
(b) 9
(c) 1
(d) 16
(e)13

Q3. The ratio between the ages of a father and a son at present is $5: 2$ respectively. Four year hence the ratio between the ages of the son and his mother will be $1: 2$ respectively. What is the ratio between the present ages of the father and the mother respectively?
(a) $3: 4$
(b) $5: 4$
(c) $4: 3$
(d) Cannot be determined
(e) None of these

Q4. The ratio of Radha's and Ruchi's present ages is $9: 4$. If the difference between the present age of Radha and the age of Ruchi 5 years hence is 5 then what is the sum of the present ages of Radha and Ruchi ?
(a) 18 years
(b) 16 years
(c) 26 years
(d) 28 years
(e) None of these

Q5. If 6 years are subtracted from the present age of Randheer and the remainder is divided by 18, then the present age of his grandson Anup is obtained. If Anup is 2 years younger to Mahesh whose age is 5 years, then what is the age of Randheer?
(a) 96 years
(b) 84 years
(c) 48 years
(d) 60 years
(e) 72 years

Q6. The average weight of a class is decreased by 1, when 25 students joined the class, whose strength is $\frac{1}{4}$ th of the existing (or old) class and the total weight of the new students is 200 kgs. What is the new average weight of class?
(a) 12 kgs
(b) 16 kgs
(c) 18 kgs
(d) 19 kgs
(e) 17 kgs

Q7. The sum of the present ages of mother and son is 45 years. Five years ago, the product of their ages was four time the mother's age at that time, then the present ages of the mother and son respectively are $\qquad$ and $\qquad$ years.
(a) 39,6
(b) 35,10
(c) 36,9
(d) 38,7
(e) 33,12

Q8. In a market research project, $20 \%$ opted for Nirma detergent whereas $60 \%$ opted for Surf Blue detergent. The rest were unsure. If the difference between those who opted for Surf Blue and those who were uncertain is 720 . How many people participated in the survey?
(a) 1800
(b) 1440
(c) 3600
(d) Data Inadequate
(e) None of these

Q9. Ram's weight is $140 \%$ of Manu's weight. Tanu's weight is $90 \%$ of Mahesh's weight. Mahesh's weight is twice as much as Manu's. What percentage of Ram's weight is Tanu's weight? (approximately)
(a) $64 \%$
(b) $78 \%$
(c) $90 \%$
(d) $72 \%$
(e) 68\%

Q10. Uday, a very clever businessman, started a business with very little capital. In the first year, he earned a profit of $50 \%$ and donated $50 \%$ of the total capital (initial capital + profit) to a charitable organization. The same course was followed in the $2^{\text {nd }}$ and $3^{\text {rd }}$ years also. If at the end of three years, he is left with Rs. 16,875 , then find the amount donated by him at the end of the $2^{\text {nd }}$ year.
(a) Rs. 45,000
(b) Rs. 12,500
(c) Rs. 22,500
(d) Rs. 20,000
(e) Rs. 24,000

Q11. If sum of 5 consecutive odd numbers is 425 , so what will be the $4^{\text {th }}$ number from the right end. if numbers is arranged in descending order?
(a) 89
(b) 79
(c) 81
(d) 83
(e) 87

Q12. If 6 years ago the ratio of ages of son and father is 2:17 and after 4 years from now the ratio will become 7:22. so, what is the current age of father?
(a) 30
(b) 34
(c) 40
(d) 42
(e) 45

Q13. Ram scored $80 \%$ marks in maths, 120 marks in English and ' $X$ ' marks in Science. if maximum marks of each subject are 200 and he scored $70 \%$ marks. Find the value of ' $X$ '?
(a) 100
(b) 120
(c) 130
(d) 140
(e) 160

Q14. The difference between $\frac{5}{8}$ of a number and $\frac{4}{7}$ of the same number is 48 . Find $\frac{1}{4}$ th of that number.
(a) 224
(b) 220
(c) 232
(d) 228
(e) 212

Q15. a, b, c and d are four consecutives even numbers, if the sum of ' $a$ ' and ' $c$ ' is 168 , what is the average of the four numbers?
(a) 84
(b) 80
(c) 82
(d) 85
(e) 78

## Solutions

S1. Ans (e)

Sol.
Let consecutive odd number $=a, a+2, a+4, a+6, a+8$
Average $=\frac{a+a+2+a+4+a+6+a+8}{5}$

$$
\begin{gathered}
11=a+4 \\
a=7
\end{gathered}
$$

smallest number $=7$
and largest number $=a+8=7+8=15$
so, average of smallest and largest number $=\frac{7+15}{2}=11$
S2. Ans (c)
Sol.
$(15423 \times 15425+x)$ is the based on the format of $\left((a-1)(a+1)=a^{2}-1\right)$
So, $15423 \times 15425+x$
$(15424-1) \times(15424+1)+x$
$15424^{2}-1+x$
So, least value of $x=1$

S3. Ans.(d)
Sol. $\frac{f}{s}=\frac{5 x}{2 x}$
$\frac{s}{m+4}=\frac{2 x+4}{m+4}=\frac{1}{2}$
$m+4=4 x+8$
$m=4 x+4$
$f: m=5 x:(4 x+4)$
Cannot be determined

S4. Ans.(c)
Sol. Let present ages of Radha and Ruchi is 9x and 4x years respectively.
ATQ
$9 x-(4 x+5)=5$
$x=2$
Ruchi $=8$ years
Radha $=18$ years
Sum of the present ages of Radha and Ruchi $=18+8=26$ years
S5. Ans (d)
Sol. Let present age of randheer $=x$ years
Age of anup $=5-2=3$ years
$\frac{x-6}{18}=3, x=60$ years
S6. Ans.(a)
Sol. $125(x-1)=100 x+200$
$x=13 \mathrm{~kg}$
required average $=13-1=12 \mathrm{~kg}$

S7. Ans. (c)
Sol. M: $\mathrm{S}=x$ : $(45-x)$
Five years ago, $x-5$ : $40-x$
From question $->(x-5)(40-x)=4(x-5)$
$x=36,5$ (drop 5 as it cannot be mother's age)
So mother's age $=36$, son $=9$
S8. Ans.(a)
Sol. Let total percentage of people who participated in survey $=100 \%$
$\therefore$ Uncertain people $=100-(20+60)$
= 20\%
ATQ,
$60 \%-20 \% \rightarrow 720$
$\therefore 100 \% \rightarrow \frac{720}{40} \times 100$
$=1800$
S9. Ans.(b)
Sol. Let Manu's weight $=x$ kg
$\therefore$ Mahesh's weight $=2 \mathrm{xkg}$
Tanu's weight $=0.9 \times 2 \mathrm{x}$
$=1.8 \mathrm{x} \mathrm{kg}$
Ram's weight $=1.4 \mathrm{x}$ kg
Required percentage $=\frac{1.4 x}{1.8 x} \times 100$
$=77.8 \% \simeq 78 \%$
S10. Ans.(c)
Sol. Let in the start of Ist year he had Rs. x.
$\therefore$ Amount left at the end of 1 st year $=\frac{150 x}{100}-\frac{150 x}{200}$
$=\frac{150 x}{200}$
$=\frac{3 x}{4}$
Amount left of the end of $2^{\text {nd }}$ year $=\frac{1}{2} \times \frac{3 x}{4} \times \frac{150}{100}$
$=\frac{9 x}{16}$
Amount left at the end of 3 rd year
$=\frac{1}{2} \times \frac{9 x}{16} \times \frac{3}{2}$
$=\frac{27 x}{64}$
ATQ,
$\frac{27 x}{64}=16875$
$\Rightarrow \mathrm{x}=40,000$
$\therefore$ Required answer $=\frac{9}{16} \times 40,000$
= 22,500

S11. Ans(e)
Sol. let the consecutive odd number be $2 \mathrm{a}+1,2 \mathrm{a}+3,2 \mathrm{a}+5,2 \mathrm{a}+7,2 \mathrm{a}+9$ where n is any natural number.
$\therefore$ according to question $2 \mathrm{a}+1+2 \mathrm{a}+3+2 \mathrm{a}+5+2 \mathrm{a}+7+2 \mathrm{a}+9=425$
So $\mathrm{a}=40$ so numbers $=81,83,85,87,89$
If we arrange the number in descending order so $4^{\text {th }}$ from right will be $=87$
S12. Ans(c)
Sol. let the age of son and father 6 years ago be 2 x and 17 x respectively
So according to queston
$\frac{2 x+10}{17 x+10}=\frac{7}{22}$
$\mathrm{X}=2$
So age of father 6 years ago $=17 \mathrm{x}=34$ years
Present age $=34+6=40$ years
S13. Ans(d)
Sol. marks in maths $=\frac{80}{100} \times 200=160$
Marks in English $=120$
Total marks $=\frac{70}{100} \times 600=420$
$\therefore 160+120+X=420$
$\mathrm{X}=140$

S14. Ans (a)
Sol. Let the number is x .
ATQ
$\frac{62.5}{100} \times x-\frac{4}{7} \times x=48$
$\frac{5}{8} x-\frac{4}{7} x=48$
$x=\frac{48 \times 56}{3}=896$
So, required no. $=896 \times \frac{25}{100}=224$
S15. Ans (d)
Sol. Let four consecutives even no. a, b, c and d are ( $\mathrm{x}-2$ ), $\mathrm{x},(\mathrm{x}+2)$ and $(\mathrm{x}+4)$ respectively.
So, $x-2+x+2=168$
$x=\frac{168}{2}=84$
So, required average $=\frac{82+84+86+88}{4}=85$

