## Quiz Date: 27th April 2020

Q1. Eleven years earlier the average age of a family of 4 members was 28 years. Now the average age of the same family with six members is yet the same, when 2 children were born in this period. If both children belong to the same parents and the age of the first child at the time of the birth of the younger child was same as there were total family members just after the birth of the youngest member of this family, then find the present age of the youngest member of the family.
(a) 3 years
(b) 5 years
(c) 6 years
(d) Can't be determined
(e) 2 years

Q2. The normal dosage of a particular medicine is $t$ tablets per day for each patient. A hospital's current supply of these tablets will last 'd' days for 'p' patients. If the recommended dosage increases by $20 \%$ and the number of patients decreases by one-third, then for how many days will the hospital's supply last?
(a) $5 \mathrm{~d} / 4$
(b) $4 \mathrm{~d} / 5$
(c) $4 \mathrm{pt} / 5$
(d) None of these
(e) $3 \mathrm{pt} / 5$

Q3. Shobha's Mathematics test had 75 problems i.e., 10 Arithmetic, 30 Algebra and 35 geometry problems. Although she answered $70 \%$ of the Arithmetic, $40 \%$ of the Algebra and $60 \%$ of the geometry problems correctly. She did not pass the test because she had done less than $60 \%$ of the problems right. How many more questions she would have needed to answer correctly to obtain $60 \%$ passing grade?
(a) 4
(b) 5
(c) 6
(d) 7
(e) 2

Q4. Three persons Amar, Akbar and Anthony invested different amounts in a fixed deposit scheme for one year at the rate of $12 \%$ per annum and earned a total interest (all together ) of Rs. 3,240 at the end of the year. If the amount invested by Akbar is Rs. 5000 more than the amount invested by Amar and amount invested by Anthony is Rs. 2000 more than the amount invested by Akbar than what is the amount invested by Akbar?
(a) Rs. 12,000
(b) Rs. 10,000
(c) Rs. 7,000
(d) Rs. 5,000
(e) Rs. 8000

Q5. From a group of 7 men and 4 women a committee of 6 persons is formed. What is the probability that the committee will consist of exactly 2 women?
(a) $5 / 11$
(b) $3 / 11$
(c) $4 / 11$
(d) $2 / 11$
(e) $6 / 11$

Directions (6-10): What should come in place of question mark (?) in the following number series?
Q6. $8,7,11,12,14,17,17,22$, ?
(a) 27
(b) 20
(c) 22
(d) 24
(e) 25


Q7. 11, 29, 83, 245, 731, ?
(a) 2193
(b) 2189
(c) 2139
(d) 2389
(e) 2219

Q8. 3, 8, 20, 46, 100, 210,?
(a) 436
(b) 438
(c) 416
(d) 432
(e) 430

Q9. 5, 7, 17, 55, 225, 1131, ?
(a) 6973
(b) 6379
(c) 7639
(d) 7369
(e) 6793

Q10. 1, 5, 14, 30, 55, 91, ?
(a) 128
(b) 140
(c) 135
(d) 138
(e) 142

Directions (11-15): Given below are 2 or 3 statements with each question, you have to decide that which of the following statement/statements are necessary to answer the question.

Q11. X, Y and Z secured 45\%, 50\% and 60\% marks respectively in Biology. W's marks in Biology is 12.5 more than X's marks and 4 less than Z's marks. Find out the individual marks of four students.
A. For the students, total marks obtained for Biology is 232.5.
B. Total of W's and X's marks in Biology is 111.5.
C. Z has obtained 66 marks.
(a) A and B together
(b) Only C
(c) A and either B or C
(d) All together
(e) None of the above

Q12. At what time will a train reach Lucknow from Patna?
A. The train crosses another train of equal length of 97.5 m and running in opposite direction in 9 sec.
B. The train leaves Patna at 11:15 am for Lucknow, which is at a distance of 567 km .
C. The length of the train is 97.5 m and it crosses a signal pole in 5 sec .
(a) Only A
(b) B and C together
(c) A and C together
(d) All statements are required
(e) Only B

Q13. Find the height of an equilateral triangle.
A. Perimeter of the triangle is equal to the perimeter of the rectangle whose length and breadth are in the ratio of $5: 3$.
B. Perimeter of a square is known, which is twice the perimeter of the triangle.
C. Area of the triangle is known.
(a) Any two of them
(b) Any of them
(c) Only C
(d) Either B or C alone
(e) A and either B or C

Q14. What is the value of a two-digit number?
A. The sum of the digits is 5 .
B. The difference of the squares of the digits is 15 .
C. The difference of their digits is 3 .
(a) A and B together are sufficient
(b) B and C together are sufficient
(c) C and A together are sufficient
(d) Any one pair of A and B, B and C or C and A is sufficient
(e) Data inadequate

Q15. How many children are there in a group?
A. The total age of the group of children is 630 years whereas the average age of children's is 15 years.
B. The total age of the group of children and 5 teachers is 855 years.
(a) only A is sufficient
(b) B and C together are sufficient
(c) C and A together are sufficient
(d) Any one pair of A and B, B and C or C and A is sufficient
(e) Data inadequate

> English | Quant | Reasoning
> DI | Puzzle | Computer | Banking
English Medium


## Solutions

S1. Ans.(a)
Sol.

|  | No. of family members | Average | Total |
| :--- | :--- | :--- | :--- |
| Eleven years earlier | 4 | 28 | 112 |
| Presently | If 4 (excluding 2children) | 39 | 156 |
|  | 6 | 28 | 168 |

Since it is obvious that just after the birth of the youngest member (i.e., child) there was 6 family members in the family.
Therefore, at the time of the birth of the youngest child the elder child's age was 6 years. Let present age of two children is ' $x$ ' and $(x+6)$ years

Now the sum of their ages

$$
\begin{aligned}
& =x+(x+6)=12=(168-156) \\
& \Rightarrow x=3
\end{aligned}
$$

S2. Ans.(a)
Sol.
$\frac{p t d}{(t+20 \% \text { of } t)\left(p-\frac{p}{3}\right)}=\frac{p t d}{\frac{6 t}{5} \times \frac{2 p}{3}}=\frac{5}{4} d$.

S3. Ans.(b)
Sol.
Number of questions attempted correctly $=(70 \%$ of $10+40 \%$ of $30+60 \%$ of 35$)$
$=(7+12+21)=40$
Questions to be answered correctly for $60 \%$ grade $=60 \%$ of $75=45$.
$\therefore$ Required number of questions $=(45-40)=5$.
S4. Ans.(b)
Sol.
Let ' $A$ ' is the amount invested by all three $12 \%$ Rate of interest on the amount invested gives an interest of Rs. 3240.
This means that $0.12 \mathrm{~A}=3240 \rightarrow \mathrm{~A}=$ Rs. 27000 .
The sum of investments should be Rs. 27000.
If Akbar invests $x$, Amar invests $x-5000$ and Anthony invests $x+2000$
$x+x-5000+x+2000=27000$
$\Rightarrow x=$ Rs. 10000
S5. Ans.(a)
Sol.
$7 \mathrm{M}, 4 \mathrm{~W} \quad$ members in committee $=6$
The favorable case may be $\rightarrow$ ( $2 \mathrm{~W}, 4 \mathrm{M}$ )
$\therefore$ Required probability $=\frac{{ }^{4} C_{2} \times 7 C_{4}}{{ }^{11} C_{6}}$
$=\frac{6 \times 35}{462}$
$=\frac{5}{11}$

S6. Ans.(b)
Sol.
Two series are there. i.e. ( $8,11,14,17,20$ ) and (7, 12, 17, 22) increasing by 3 and 5 respectively.

S7. Ans.(b)
Sol.
Series is $\times 3-4$
So, ? $=731 \times 3-4=2189$

S8. Ans.(d)
Sol.
Series is as $\times 2+2, \times 2+4, \times 2+6, \times 2+8, \times 2+10, \times 2+12$
So, ?=210 $\times 2+12=432$
S9. Ans.(e)
Sol.
Series is as, $\times 1+2, \times 2+3, \times 3+4, \times 4+5, \times 5+6, \times 6+7$
$?=1131 \times 6+7=6793$.
S10. Ans.(b)
Sol.
Pattern is $+2^{2},+3^{2},+4^{2},+5^{2} \ldots \ldots$.
? $=91+7^{2}=140$


S11. Ans. (e)
Sol.
$(60-45) \%=12.5+4$
$100 \%=\frac{16.5}{15} \times 100=110$
$x=49.5, y=55, z=66, w=62$
So none of the statements is required

S12. Ans. (b)
Sol.

St. A = relative speed of train

$$
=\frac{195}{9} \mathrm{~m} / \mathrm{s} \text { or } 78 \mathrm{~km} / \mathrm{h}
$$

St. $B=$ Distance $=567 \mathrm{~km}$
St. C = Speed of train

$$
=\frac{97.5}{5}=19.5 \mathrm{~m} / \mathrm{s}
$$

The speed of the other train is not known so only B and C are the required Statements

S13. Ans. (d)
Sol.
Let area of triangle $=163 \mathrm{sq} . \mathrm{m}$. and perimeter of square $=48 \mathrm{~m}$.
St. C $-\frac{\sqrt{3}}{4} a^{2}=163$, from here side of the equilateral triangle and height can be calculated.
St. B — Side of triangle

$$
\begin{aligned}
& =\frac{48}{3 \times 2}=8 \\
h & =\frac{\sqrt{3}}{2} a
\end{aligned}
$$

St. A - no conclusion
So, using either B or C alone we can find the height.

S14. Ans.(d)
Sol.
From I, $x+y=5$
From II $x^{2}-y^{2}=15$
From III $x-y=3$
So, number can be 41 or 14
$\therefore$ Any one pair of statements A, B and $C$ is sufficient to give the answer.

S15. Ans.(a)
Sol.

## From A:

Total no. of students $=\frac{630}{15}=42$
From B,
We cannot calculate the no. of students.
So only statement A is sufficient.

