Quiz Date: 26th June 2020

Directions (1-3): The following questions are accompanied by three statements (A) or (I), (B) or (II), and (C) or (III). You have to determine which statements(s) is/are sufficient/necessary to answer the questions.

Q1. What is the area of the right–angled triangular garden?
I. Perimeter of the garden is y cm.
II. Length of the hypotenuse is x cm.
III. Perpendicular sides of the garden are in the ratio of 5 : 12.
(a) Only I and III or only II and III
(b) All I, II and III
(c) Any two of the three
(d) Only I and III
(e) None of the above

Q2. What is the monthly salary of Pravin?
I. Pravin earns Rs. 1200 more than Aman.
II. The ratio between Aman and Vimal's monthly salary is 5 : 3.
III. Vimal earns Rs. 1,000 less than Aman.
(a) Any two of I, II and III are required.
(b) Only I and II are required
(c) Only II and III are required
(d) All I, II and III together are required
(e) None of these

Q3. What is the area of the isosceles triangle?
I. Perimeter of the triangle is 14 metres.
II. Base of the triangle is 14 metres.
III. Height of the triangle is 5 metres.
(a) I and II only
(b) II and III only
(c) I and II only or II and III only
(d) I and III only
(e) All I, II and III

Directions (4-8): Each of the question below consists of a question and two statements numbered (i) and (ii) given below it. You have to decide whether the data provided in the statements is sufficient to answer the question. Read both the statements and give the answer.
(a) If the data in statement (I) alone is sufficient to answer the question, while the data in statement (II) alone is not sufficient to answer the question.
(b) If the data in statement (II) alone is sufficient to answer the question, while the data in statement (I) alone is not sufficient to answer the question.
(c) If the data either in statement (I) alone or in statement (II) alone is sufficient to answer the question.
(d) If the data both statements (I) and (II) together are not sufficient to answer the question.

(e) If the data in both statements (I) and (II) together are necessary to answer the question.

Q4. 6 men and 10 women are working together in a field. After working for 2 days, 3 men and 6 women leave the work. How many more days will be required to complete the work?
I. 12 men can complete three-fourth of the same work in 12 days
II. In 1 day, the work done by 2 men is equal to the work done by 3 women.

Q5. What percentage of simple interest per annum did Anuj pay to Aman?
I. Anuj borrowed Rs 5000 from Aman for 2 years
II. Anuj returned Rs 5500 to Aman at the end of 1st year and settled the loan.

Q6. What is the length of a running train crossing another 190 metre long train running in the opposite direction?
I. The trains took 12 seconds to cross each other.
II. The relative speed of the two trains was 120 km/h

Q7. What is the profit percent gained by selling an almirah?
I. 4% discount is given on list price and if discount is not given, 25% profit is gained.
II. The cost price of the almirah is Rs 18,000.

Q8. Find the length of rectangle whose area is equal to the area of the right-angled triangle.
I. The base of the triangle is 30 cm
II. The height of the triangle is 60 cm.

Directions (9-10): In each question two equations numbered (i) and (ii) are given. You have to solve both the equations and give answer
(a) If $x < y$
(b) If $x > y$
(c) If $x \geq y$
(d) If $x \leq y$
(e) If $x = y$ or no relation can be established
Q9.   (i) $x^2 + 16x - 192 = 0$
(ii) $y^2 - 20y + 96 = 0$

Q10.   (i) $6x^2 - 17x + 12 = 0$
(ii) $12y^2 - 17y + 6 = 0$

Directions (11-15): In each question two equations numbered (I) and (II) are given. Student should solve both the equations and mark appropriate answer.
(a) If x=y or no relation can be established
(b) If x>y
(c) If x<y
(d) If x>=y
(e) If x<=y

Q11. (I) $4 = \frac{3}{x} + \frac{5}{2x^2}$
    (II) $14y = \frac{6}{y} + 5$

Q12. (I) $7x^2 + 69x + 54 = 0$
    (II) $16y^2 + 30y + 11 = 0$

Q13. (I) $2x^2 - 11x + 15 = 0$
    (II) $\frac{24y}{17} + \frac{19}{y} = \frac{178}{17}$

Q14. (I) $(x + 6)^2 = 81$
    (II) $(y + 3)^2 = 121$

Q15. (I) $3(x)^{\frac{3}{2}} + \frac{14}{3}(x)^{-1/2} = \frac{15}{2}(x)^{1/2}$
    (II) $12y^2 - 16y + 5 = 0$

Solutions

S1. Ans.(a)
Sol.
From III, $b : h = 5 : 12$
From I , Perimeter $= y$ cm
II, hypotenuse $= x$ cm
From I and III or II and III we can determine the area of the garden.

S2. Ans.(d)
Sol.
From I, Pravin = Aman + 1200
From II and III, $\frac{Aman}{Vimal} = \frac{5}{3}$
$\frac{Aman}{Aman-1000} = \frac{5}{3}$
∴ All statements are necessary to get the monthly salary of Pravin.

S3. Ans.(b)
Sol.
From I and II

$a + b + c = 14$

$14 + b + c = 14$

$b + c = 0$ (not possible)

From II and III,

Area of isosceles triangle$=\frac{1}{2} \times base \times height$

$=\frac{14 \times 5}{2}$ =35 m²

RBI ASSISTANT
COMPELTE
E-KIT
English | Quant | Reasoning
DI | Puzzle | Computer | Banking
(English Medium)

S4. Ans.(e)

Sol.

From (I): work done by 1 man in 1 day $= \frac{1}{192}$

From (I) and (II): work done by 1 women $= \frac{1}{288}$

So, the remaining work done by 3 men and 4 women will require around 31 – 32 more days.

S5. Ans.(e)

Sol.

From statement (I), we know the sum and the time and from statement (II), we know the simple interest; so, we can calculate the required rate of interest.

S6. Ans.(e)

Sol.

From statement (I) and (II), time taken to cross each other =

$$\frac{\text{Length of required train} + 190}{120 \times \frac{5}{18}} = 12$$

⇒ Length of required train = 210 m.

S7. Ans.(a)

Sol.

From (I), selling price of Almirah = 96% of list price (say x) = Rs $\frac{24x}{25}$ and when there is no discount, selling price= Rs x and profit = 25%, then cost price = $Rs \frac{4x}{5}$, therefore gain = $\frac{24x}{25} - \frac{4x}{5} = Rs \frac{4x}{25}$, hence the required gain percentage = 20%

S8. Ans.(d)

Sol.
From statement (I) and (II), we cannot get the relation between the length and breadth of the rectangular field.

S9. Ans.(d)
Sol.
(i) $x^2 + 16x - 192 = 0$
$x^2 + 24x - 8x - 192 = 0$
$x = -24, 8$

(ii) $y^2 - 20y + 96 = 0$
$y^2 - 8y - 12y + 96 = 0$
$y = 8, 12$
∴ $y \geq x$

S10. Ans.(a)
Sol.
(i) $8x + 3y = 7$
(ii) $4x + 9y = 8.5$
Solving (i) and (ii)
$x = \dfrac{5}{8}$ & $y = \dfrac{2}{3}$
∴ $y > x$

S11. Ans.(a)
Sol.
$4 = \dfrac{3}{x} + \dfrac{5}{2x^2}$
$4 = \dfrac{6x+5}{2x^2}$
$8x^2 - 6x - 5 = 0$
$8x^2 - 10x + 4x - 5 = 0$
$2x(4x - 5) + 1(4x - 5) = 0$
$(4x - 5)(2x + 1) = 0$
$x = \dfrac{5}{4}, -\dfrac{1}{2}$
II.
$14y = \dfrac{6}{y} + 5$
$14y = \dfrac{6+5y}{y}$
$14y^2 - 5y - 6 = 0$
$14y^2 - 12y + 7y - 6 = 0$
$2y(7y - 6) + 1(7y - 6) = 0$
$(7y - 6)(2y + 1) = 0$
$y = \dfrac{6}{7}, -\dfrac{1}{2}$
So, no relation.

S12. Ans.(a)
Sol.
I.
$7x^2 + 69x + 54 = 0$
$7x^2 + 63x + 6x + 54 = 0$
$7x (x + 9) + 6 (x + 9) = 0$
$(x + 9) (7x + 6) = 0$
$x = -9, -\frac{6}{7}$
II. $16y^2 + 30y + 11 = 0$
$16y^2 + 22y + 8y + 11 = 0$
$2y (8y + 11) + 1(8y + 11) = 0$
$(8y + 11) (2y + 1) = 0$
$y = -\frac{11}{8}, -\frac{1}{2}$
So, no relation

S13. Ans.(c)
Sol.
I. $2x^2 - 11x + 15 = 0$
$2x^2 - 6x - 5x + 15 = 0$
$2x (x - 3) -5 (x - 3) = 0$
$(x - 3) (2x - 5) = 0$
$x = 3, \frac{5}{2}$
II. $\frac{24y}{17} + \frac{19}{y} = \frac{178}{17}$
$\frac{24y^2 + 323}{17y} = \frac{178}{17}$
$24y^2 - 178y + 323 = 0$
$24y^2 - 102y - 76y + 323 = 0$
$6y (4y - 17) - 19 (4y - 17) = 0$
$(4y - 17) (6y - 19) = 0$
$y = \frac{17}{4}, \frac{19}{6}$
So, y > x

S14. Ans.(a)
Sol.

I.$(x + 6)^2 = 81$
$\Rightarrow (x+6)=\pm 9$
$\Rightarrow x=3, -15$
II. $(y + 3)^2 = 121$
$\Rightarrow (y + 3) = \pm 11$

$y + 3 = 11$	$y + 3 = -11$
$y = 8$	$y = -14$

So, no relation

S15. Ans.(b)
Sol.
I. $3(x)^{\frac{3}{2}} + \frac{14}{3\sqrt{x}} = \frac{15\sqrt{x}}{2}$
$\frac{9x^2+14}{3\sqrt{x}} = \frac{15\sqrt{x}}{2}$
$18x^2 + 28 = 45x$
$18x^2 - 45x + 28 = 0$
$18x^2 - 24x - 21x + 28 = 0$
$6x (3x - 4) - 7 (3x - 4) = 0$
$(3x - 4) (6x - 7) = 0$
$x = \frac{4}{3}, \frac{7}{6}$
II. $12y^2 - 16y + 5 = 0$
$12y^2 - 10y - 6y + 5 = 0$
$2y (6y - 5) - 1 (6y - 5) = 0$
$(6y - 5) (2y - 1) = 0$
$y = \frac{5}{6}, \frac{1}{2}$
So, x > y

For any Banking/Insurance exam Assistance, Give a Missed call @ 01141183264