Quiz Date: 24th April 2020

Directions (1-5): The following questions are accompanied by three statements I or A, II or B and III or C. You have to determine which statement(s) is/are sufficient/necessary to answer the questions and mark your answer accordingly

Q1. What is the age of the Rambha in her family?
I. Total age of Rambha, her father, her mother & her brother is 90 years.
II. Average age of Rambha, her mother and her brother is 18 years and 4 months.
III Average age of her mother and brother is four seventh of her father's age.
(a) Only I & II
(b) Only I & III
(c) Only II & Ill
(d) All I, II & III
(e) None of these

Q2. 12 girls and 8 children can complete a piece of work in 24 days together. How many days will it take for 12 men and 12 girls to complete the same work?
A. 2 men can do as work as 3 girls and 2 children can do together.
B. 3 girls can do as work as 6 children can do.
C. All of them together can complete the entire work in $\frac{768}{67}$ $days$.
(a) Any two of them
(b) Only from A and B
(c) Only C
(d) Either A or B only
(e) No need of any information

Q3. What is the marked price of the mobile?
A. Shopkeeper gives 15% discount on the mobile and he earns a total profit of 20 percent.
B. The cost price of a power bank is 40% less than the cost price of mobile.
C. By selling the power bank in Rs.560 a profit of 10 percent is earned.
(a) Only A or B alone
(b) Only B or C alone
(c) Only A and C together
(d) Any two of them together
(e) All statements are necessary.

Q4. A bag contains balls of three different colours ie, red, yellow and green. 3 balls are drawn randomly. What is the probability that the balls drawn are of three different colours?
A. The no. of yellow balls is two more than the no. of red balls.
B. The Sum of the no. of yellow and green balls is three times the no. of red balls.
C. The ratio of the no. of red balls to that of green balls is 3 : 4.
(a) A and either B or C
(b) Any two of them
(c) Only A and C together
(d) Question can't be answered even after using all the information

(e) All statements are required

Q5. A boat takes 2 hours to travel from point A to B in still water. To find out its speed in upstream, which of the following information is/are required?
A. Distance between point A and B.
B. Time taken to travel downstream from B to A.
C. Speed of the stream of water.
(a) Any two of them are sufficient
(b) Even with all these, the answer cannot be found
(c) Only A and B
(d) Only A and C
(e) None of these

Directions (6-10): Compare the value of 2 quantities given in the question and give answer

Q6. **Quantity I — cost price of an article (in Rs.),** having marked price Rs. 400, which when sold at 20% discount still make a gain of $6\frac{2}{3}\%$.
Quantity II — cost price of an article (in Rs.), which is sold at 14% profit and if cost price and selling price both are decreased by Rs. 117, the profit would be 9% more.
(a) if quantity I > quantity II
(b) if quantity I < quantity II
(c) if quantity I ≥ quantity II
(d) if quantity I ≤ quantity II
(e) if quantity I = quantity II or no relation can be established

Q7. **Quantity I** — the sum of money for which the difference between SI and CI obtained on it in 2 years at 6% per annum compounded annually is Rs. 43.2.
Quantity II — Rs. 12850
(a) if quantity I > quantity II
(b) if quantity I < quantity II
(c) if quantity I ≥ quantity II
(d) if quantity I ≤ quantity II
(e) if quantity I = quantity II or no relation can be established

Q8. **Quantity I** — average income of the whole group of 75 people, if average income of the men in the group is Rs. 4200 and that of women is Rs. 4000. (total men: total women = 8 : 7)
Quantity II — The average income of 20 people, which decreases by Rs. 150 if a person with income of Rs. 1000 joins them.
(a) if quantity I > quantity II
(b) if quantity I < quantity II
(c) if quantity I ≥ quantity II
(d) if quantity I ≤ quantity II
(e) if quantity I = quantity II or no relation can be established

Q9. **Quantity I** — The distance of school from Aman's house if he reaches school 5 minutes late while walking at 4 km/hr but 10 minutes earlier than scheduled time walking at 5 km/hr.
Quantity II — 5 km
(a) if quantity I > quantity II
(b) if quantity I < quantity II
(c) if quantity I ≥ quantity II
(d) if quantity I ≤ quantity II
(e) if quantity I = quantity II or no relation can be established

Q10. **Quantity I** — Product of 2 numbers, whose sum is 17 and sum of the squares of 2 no. is 145.
Quantity II — Sum of 2 numbers, whose product is 1400 and difference between them is 5.
(a) if quantity I > quantity II
(b) if quantity I < quantity II
(c) if quantity I ≥ quantity II
(d) if quantity I ≤ quantity II
(e) if quantity I = quantity II or no relation can be established

Solutions

S1. Ans.(d)
Sol.
From A, R + F + M +B = 90
From B, R + M + B = $18\frac{1}{3} \times 3$
From C, M + B = $\frac{4}{7} \times 2F$
From all three statements together, the answer can be obtained.

S2. Ans.(b)
Sol.
12G + 8C → 24 days
⇒ 3G + 2C → 24×4 days
From A,
2M = (3G + 2C)

$\Rightarrow 2M \rightarrow 24 \times 4$ days
$\Rightarrow 1M \rightarrow 24 \times 4 \times 2$ days
From B, 3G = 6C
$\Rightarrow G = 2C, \Rightarrow (12 + 4)\, G \rightarrow 24$ days
$\Rightarrow 1G \rightarrow 24 \times 16$ days
$\therefore from\ A + B, 12M + 12G \rightarrow \left(\frac{1}{24\times8} + \frac{1}{24\times16}\right) \times 12$
$\rightarrow \frac{1}{16} + \frac{1}{32} \quad \rightarrow \frac{32}{3}$ days
From C,
Not known no. of persons.

S3. Ans.(e)
Sol.
Let M.P of mobile = 100x
From A, SP of mobile $= 85x$
C.P. of mobile $= 85x \times \frac{100}{120} = \frac{425}{6}x$
From B, CP of power bank $= \frac{425x}{6} \times \frac{60}{100} = 42.5x$
From C, $42.5x \times \frac{110}{100} = 560$
$46.75x = 560$
From all three statements together, the answer can be obtained.

S4. Ans.(e)
Sol.
From I, $y = r + 2$
From II, $y + g = 3r$
From III, $r : g = 3 : 4$
To determine the no. of different colour balls, all statements are required.

S5. Ans.(a)
Sol.

Let distance = d
Speed in still water = x
Speed of current = y
$\therefore \frac{d}{x} = 2$
From I, d given
From II, $\frac{d}{x+y}$ = given
From III, y = given
So, any two of them together are sufficient.

S6. Ans.(a)
Sol.

Quantity I — SP = $400 \times \frac{80}{100} = 320$
CP = $\frac{300}{320} \times 320$ = Rs. 300
Quantity II — Let CP = $100x$
SP = $114x$
New CP = $100x - 117$
New SP = $114x - 117$
Profit percentage = $\frac{14x}{(100x-117)} \times 100 = 23$
$x = 2.99$, CP = 299 Rs.
Quantity I > Quantity II

S7. Ans.(b)
Sol.

Quantity I — $\frac{P(6)^2}{(100)^2} = 43.2$
P = 12000 Rs.
Quantity II — Rs. 12850
Quantity I < Quantity II

S8. Ans.(b)
Sol.

Quantity I — men → 40, women → 35
Average = $\frac{40\times4200+35\times4000}{75} = 4106\frac{2}{3}$ Rs
Quantity II — Let the average = x
$\frac{20x+1000}{21} = (x - 150), x = 4150$ Rs.
quantity I < quantity II

S9. Ans.(e)
Sol.

Let distance be x km.

$\frac{x}{4}-\frac{x}{5}=\frac{15}{60}, x=5$ km

Quantity I = Quantity II

S10. Ans.(e)

Sol.

Quantity I — $x+y=17$ .....(i)

$x^2+y^2=145$ .....(ii)

Squaring both side in eq (i)

$x^2+y^2+2xy=289$

$x^2+y^2=145$

$xy=\frac{144}{2}=72$

Quantity II — $x(x+5)=1400$

$x=-40, x+5=-35$

or $x=35, x+5=40$, sum = – 75 or 75