Quiz Date: 13th September 2020

Directions (1-3): In the following questions, two equations numbered I and II are given. You have to solve both questions and give answer among the following options.

Q1.
I. $x + 3y = 3$
II. $81x + 5y = 5$
(a) if x > y
(b) if x ≥ y
(c) if x < y
(d) if x ≤ y
(e) if x = y or the relationship cannot be established.

Q2.
I. $x^2 + 5x + 6 = 0$
II. $y^2 - 7y + 10 = 0$
(a) if x > y
(b) if x ≥ y
(c) if x < y
(d) if x ≤ y
(e) if x = y or the relationship cannot be established.

Q3.
I. $x^2 - 4x - 21 = 0$
II. $y^2 - 36 = 0$
(a) if x > y
(b) if x ≥ y
(c) if x < y
(d) if x ≤ y
(e) if x = y or the relationship cannot be established.

Q4. The ratio of four wheelers and two wheelers in the parking is 11 : 25 respectively. The average number of four wheelers and two wheelers in the parking be 324. Find the number of two wheelers in the parking?
(a) 410
(b) 405
(c) 420
(d) 450
(e) 518

Q5. 2 men and 3 women can complete a piece of work in 20 days while 3 men and 2 women can complete the same work in 16 days. Find out in how many days 2 men and 1 woman can complete the same work?

(a) 24 days
(b) 25 days
(c) 26 days
(d) 27 days
(e) 28 days

Q6. Age of A is twice the age of B. 8 years ago, age of A was four times that of B. Find the age of B 8 years hence?
(a) 18 years.
(b) 14 years.
(c) 16 years.
(d) 28 years.
(e) 20 years.

Directions (7-8): In the following questions, calculate quantity I and quantity II, compare them and answer
(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 distance (in km), covered by a train in 5 hours, it covers same distance in 1 hour early if its speed increased by 30 km/h.
Quantity II- 600 km

Q8. Quantity I- X, 40% of X = 40% of 200 + 30% of 100.
Quantity II- Y, 25% of Y = 35% of 240 + 25% of 120.

Directions (9-10): What will come at the place of question mark (?) in the following questions.
Q9. 6, 15, 35, 77, 143, 221, ?
(a) 250
(b) 363
(c) 243
(d) 323

(e) 343

Q2. 9, 13, 21, 37, 69, 133, 261, ?
(a) 469
(b) 433
(c) 420
(d) 561
(e) 517

Directions (11-15): Study the table carefully and answer the questions.
Table given below shows percentage of books sold of 3 different publications by five different seller in a month.
Note: Books are sold by three publication only.

Sellers	Books sold of Adda Pub.	Books sold of 'XY' Pub.	Books sold of 'YZ' pub.
A	480	24%	16%
B	780	20%	15%
C	25%	650	10%
D	10%	30%	540
E	30%	20%	550

Q11. Books sold by seller B of XY and YZ pub. Together is how much more/less than books sold by E of Adda & YZ publications together?
(a) 360
(b) None of these
(c) 380
(d) 420
(e) 460

Q12. Books sold by seller C of Adda & XY together is what percent of total books sold by seller D ?
(a) 100%
(b) 80%
(c) None of these
(d) 150%
(e) 120%

Q13. What is average number of books sold by all sellers of Adda publication ?
(a) 392
(b) 386
(c) 406
(d) None of these
(e) 414

Q14. If selling price of each book of Adda publication sold by seller C is Rs. 250 and selling price of each book of XY publication sold by seller D is Rs. 220. Then find the difference in selling price of books of Adda publication sold by C and XY publication sold by D ?
(a) Rs. 4500
(b) Rs. 2900
(c) Rs. 3600
(d) Rs. 3100
(e) Rs. 4200

Q15. If profit made on each book sold by seller E is Rs. 44. Then find profit percent of each book sold by seller E ? (given that selling price of each book is Rs. 264)
(a) 22%
(b) 25%
(c) 20%
(d) 15%
(e) 30%

Solutions

S1. Ans(c)
Sol.

I. $x + 3y = 3$
II. $81x + 5y = 5$
$equation\ (I) \times 81 - eq\ (II)$
$On\ solving\ both\ equations$
$y = 1$
$from\ eqn\ (1)$
$x + 3 = 3$
$x = 0$
$So, x < y$

S2. Ans(c)
Sol.

I.
$x^2 + 5x + 6 = 0$
$x^2 + 3x + 2x + 6 = 0$
$(x + 3)(x + 2) = 0$
$x = -3, -2$
II. $y^2 - 7y + 10 = 0$
$y^2 - 5y - 2y + 10 = 0$
$(y - 5)(y - 2) = 0$
$y = 2, 5$
$So, x < y$

S3. Ans(e)

Sol.

I. $x^2 - 4x - 21 = 0$

$x^2 - 7x + 3x - 21 = 0$

$(x - 7)(x + 3) = 0$

$x = 7, -3$

II. $y^2 - 36 = 0$

$y^2 = 36$

$y = \pm 6$

$So, No\ relation\ bet^n\ x\ and\ y.$

S4. Ans. (d)

Sol.

Let no. of four wheelers and two wheelers be 11x and 25x respectively.

ATQ,

$\frac{11x+25x}{2} = 324$

$18x = 324$

$25x = \frac{324}{18} \times 25 = 450$

two wheelers = 450

S5. Ans. (b)

Sol.

$(2M + 3W) \times 20 = (3M + 2W) \times 16$

$\frac{M}{W} = \frac{7}{2}$

ATQ,

Let required time t days.

$(2M + 1W) \times t = (2M + 3W) \times 20$

$t = \frac{(2\times7+3\times2)\times20}{(2\times7+2)}$=25 days

S6. Ans. (e)

Sol.

Let age of B = x years.

And A = 2x.

ATQ,
$2x - 8 = 4 \times (x - 8)$
2x = 24
x = 12 years.
B's age 8 years hence = 12 + 8 = 20 years.

S7. Ans. (e)
Sol.
Quantity I
ATQ,
$\frac{D}{4} - \frac{D}{5} = 30$
D=600 km.
So, Quantity I = Quantity II.

S8. Ans. (b)
Sol.
Quantity I.
$\frac{2}{5} \times X = 40\% \ of \ 200 + 30\% \ of \ 100.$
$\frac{2}{5}X = 110$
X=275

Quantity II.
$\frac{Y}{4} = 114$
Y=456.
Quantity I < Quantity II

S9. Ans.(d)
Sol.
$2 \times 3 = 6$
$3 \times 5 = 15$
$5 \times 7 = 35$
$7 \times 11 = 77$
$11 \times 13 = 143$
$13 \times 17 = 221$
$17 \times 19 = 323$
So, ?=323

S10. Ans.(e)
Sol.
$9 + 4 = 13$
$13 + 8 = 21$
$21 + 16 = 37$
$37 + 32 = 69$
$69 + 64 = 133$
$133 + 128 = 261$

$261 + 256 = 517$

S11. Ans.(e)
Sol.
Books sold of XY and YZ publications together by seller B
$= \frac{780}{65} \times 35 = 420$
Books sold of Adda & YZ publication together by seller E
$= \frac{550}{50} \times 30 + 550$
$= 330 + 550 = 880$
Required difference = 880 – 420 = 460

S12. Ans.(a)
Sol.
Books sold of Adda & XY publication together by seller C
$= \frac{650}{65} \times 25 + 650$
$= 250 + 650$
$= 900$
Total book sold by D
$= \frac{540}{60} \times 100$
$= 900$
Required% $= \frac{900}{900} \times 100 = 100\%$

S13. Ans.(b)
Sol.
Required Avg. $= \frac{1}{5}\left[480 + 780 + \frac{650}{65} \times 25 + \frac{540}{60} \times 10 + \frac{550}{50} \times 30\right]$
$= \frac{480+780+250+90+330}{5}$
$= \frac{1930}{5} = 386$

S14. Ans.(d)
Sol.
Required difference $= \left(\frac{650}{65} \times 25 \times 250\right) - \left(\frac{540}{60} \times 30 \times 220\right)$
$= 62500 - 59400$
$= 3100$

S15. Ans.(c)
Sol.
Cost price of each book = 264 – 44 = 220
$\therefore$ Profit % $= \frac{44}{220} \times 100 = 20\%$