Quiz Date: 6th April 2020

Q1. X takes 4 days to complete one-third of a job, Y takes 3 days to complete one-sixth of the same work and Z takes 5 days to complete half the job. If all of them work together for 3 days and then X and Z quit, how long will it take for Y to complete the remaining work done.
(a) 6 days
(b) 8.1 days
(c) 5.1 days
(d) 7 days
(e) None of these

Q2. A, B and C working together completed a job in 10 days. However, C only worked for the first three days when 37/100 of the job was done. Also, the work done by A in 5 days is equal to the work done by B in 4 days. How many days would be required by the fastest worker to complete the entire work?
(a) 20 days
(b) 25 days
(c) 30 days
(d) 40 days
(e) None of these

Q3. Three men A, B and C working together 8 hours per day can print 960 pages in 20 days. In an hour B prints as many pages more than A as C prints as many pages more than B in an hour. The number of pages printed by A in 4 hours equal to the number of pages printed by C in 1 hours. How many pages B prints in each hour?
(a) 1
(b) 2
(c) 3
(d) 4
(e) 6

Q4. A and B together can do a work in 10 days. C can destroy the same work in 28 days. A and B started the work and work for 12 days simultaneously and C started with them for destroying the work for same 12 days. After that A and C leave and B complete the remaining work in 4 days in how many days A alone can complete the same work.
(a) $\frac{71}{3}$ days
(b) 23 days
(c) 20 days
(d) 15 days
(e) $\frac{70}{3}$ days

Q5. Anshu can do as much work in 2 days as Bahu can do in 3 days and Bahu can do as much in 4 days as Daya in 5 days. A piece of work takes 20 days if all work together. How long Bahu take to do all the work by himself ?
(a) 82 days

(b) 44 days
(c) 66 days
(d) 50 days
(e) 62 days

Directions (6-10): What should come in place of the question mark (?) in the following questions?

Q6. $(-251 \times 21 \times -12) \div ? = 158.13$
(a) 250
(b) 400
(c) 300
(d) 15
(e) 18

Q7. $[(130)^2 \div 25 \times 15] \div 30 = ?$
(a) 352
(b) 314
(c) 326
(d) 338
(e) 426

Q8. (6.5% of 375) – (0.85% of 230) =?
(a) 23.42
(b) 24.24
(c) 21.64
(d) 25.76
(e) 22.42

Q9. $?^2 + (14)^2 \times 18 \div 6 - 1029 = 80 \times (12 - 7)$
(a) 25
(b) 841
(c) 729
(d) 27
(e) 29

Q10. $(4444 \div 40) + (645 \div 25) + (3991 \div 26) = ?$

(a) 280.4
(b) 290.4
(c) 295.4
(d) 285.4
(e) 258.5

Directions (11 –15): Study the following information carefully to answer the questions.
In a comparative study of population of six states. A, B, C, D, E and F the following were observed.
Female population of state A is 120% of the male population of state C and 90% of the female population of state D.
Male population of state B is 125% of the male population of state D and $1\frac{11}{14}$ times of the male population of state E. Male and female populations of state D are in the ratio of 13 : 12 respectively.
Male population of state A is $\frac{5}{11}$ th of the total population of the state which is 198000.
Female population of state C is 110% of the female population of state A and 75% of the male population of state F.
Male and female populations of state E are in the ratio of 7 : 8 respectively.
Female population of state B is 150% of the male population of state A.
Female population of state F is equal to the male population of state D.

Q11. Male population of state A is what percent more or less than female population of state B?
(a) $14\frac{2}{7}\%$
(b) $16\frac{2}{3}\%$
(c) $25\frac{2}{3}\%$
(d) $33\frac{1}{3}\%$
(e) $28\frac{2}{7}\%$

Q12. What is the ratio of male population of state C to the female population of state F?
(a) 7 : 12
(b) 8 : 15
(c) 9 : 13
(d) 11 : 16
(e) 10 : 13

Q13. What is the total population in state D?
(a) 1,80,000
(b) 2,50,000
(c) 2,10,000
(d) 2,60,000
(e) 2,00,000

Q14. What is the average of female population from state A, B and D together?
(a) 1,21,000
(b) 1,22,000
(c) 1,18,000
(d) 1,15,000
(e) 1,24,000

Q15. What is the total population of state F?
(a) 1,90,600
(b) 2,58,600
(c) 2,22,400
(d) 1,53,500
(e) 2,88,400

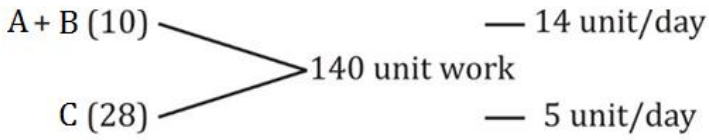
Solutions

S1. Ans.(c)
Sol. per day work of X $= \frac{1}{12}$
per day work of Y $= \frac{1}{18}$
per day work of Z $= \frac{1}{10}$
Let Y take n days to complete remaining work then
$\frac{3}{12} + \frac{3}{18} + \frac{3}{10} + \frac{n}{18} = 1$
$\frac{n}{18} = 1 - \frac{1}{4} - \frac{1}{6} - \frac{3}{10}$
$= \frac{60 - 15 - 10 - 18}{60}$
$\Rightarrow \frac{n}{18} = \frac{17}{60}$
$n = \frac{17 \times 18}{60} = n = 5.1$ days

S2. Ans.(a)
Sol.
3 days work =37%
Remaining 63% done by (A +B) in 7 day
(A + B)'s 1 day's work = 9%
So,
A one day's work = 4%
B one day work = 5%
C's 3 days work = 37% – 27% = 10%
So fastest is B and complete work in 20 days.

S3. Ans.(b)
Sol. $(A + B + C)$per hour $= \frac{960}{20\times8} = 6$ ... (i)
Let C prints $4x$ pages per hour.
∴ A will print x pages per hour.
According to question
C – B = B – A
⇒ 2B = A + C
$\Rightarrow B = \frac{5x}{2}$
From (i)
$x + \frac{5x}{2} + 4x = 6$
$\Rightarrow 7.5x = 6 \Rightarrow x = \frac{6}{7.5}$
$\therefore$ No. of pages print by B per hour $= \frac{5}{2} \times \frac{6}{7.5} = 2$

S4. Ans.(e)
Sol.
A and B can do a work → 10 days
C can destroy the work → 28 days



After 12 days
14 × 12 – 5 × 12 = 108-unit work done
B complete the work in 4 days
$\frac{140 - 108}{4} = 8$ unit/day (B's efficiency)
A's efficiency = 14 – 8 = 6 unit/days
A can complete work
$= \frac{140}{6}\text{day} = 23\frac{1}{3}\text{days}$

S5. Ans.(c)
Sol.
Ratio of efficiencies of Anshu, Bahu and Daya respectively
$= \frac{3}{2} : 1 : \frac{4}{5}$
$= 15 : 10 : 8$
∴ Time taken by Bahu
$= \frac{33}{10} \times 20$
$= 66$ days

S6. Ans.(b)
Sol.
$\frac{(-251 \times 21 \times (-12))}{?} = \frac{15813}{100}$
$? = 400$

S7. Ans.(d)
Sol.
$? = \left[\frac{130 \times 130}{25} \times 15\right] \frac{1}{30} = 338$

S8. Ans.(e)
Sol.
$? = 24.375 - 1.955 = 22.420$

S9. Ans.(e)
Sol.
$?^2 - 441 = 80 \times 5$
$\Rightarrow ? = \sqrt{841}$
$\Rightarrow ? = 29$

S10. Ans.(b)
Sol.
$?=111.1 + 25.8 + 153.5$
$= 290.4$

S (11-15)

State	Male	Female
A	90,000	1,08,000
B	1,62,500	1,35,000
C	90,000	1,18,800
D	1,30,000	1,20,000
E	91,000	1,04,000
F	1,58,400	1,30,000

S11. Ans.(d)
Sol.
Required percentage $= \frac{1,35,000 - 90,000}{1,35,000} \times 100 = \frac{45,000}{1,35,000} \times 100 = 33\frac{1}{3}\%$

S12. Ans.(c)
Sol.
Required ratio $= \frac{90,000}{1,30,000} = 9 : 13$

S13. Ans.(b)
Sol.
Total population of state = 1,30,000 + 1,20,000 = 2,50,000

S14. Ans.(a)
Sol.
Average of female population of state A, B and D together
$= \frac{108000 + 135000 + 120000}{3}$
$= 121000$

S15. Ans.(e)
Sol.
Total population of F = 1,58,400 + 1,30,000 = 2,88,400