# ALL BRANCH (Hinglish)

## General Aptitude

Quantitative Aptitude

DPP 05 Discussion Notes

Time & Work

Chain Rule

By- Amulya Ratan Sir

# MCQ

If 72 men can build a wall 280m. long in 21 days, how many men will take 18 days to build a similar type of wall of length 100m.?

A 30

B 10

C 18

D 28

$$72 \times \frac{100}{280} \times \frac{21}{18} = 30$$

| Men | Wall | Days |
|---|---|---|
| 72 | 280m | 21 |
| ? | 100m | 18 |

# MCQ

A takes twice as much time as B or thrice as much time as C to finish a piece of work. Working together, they can finish the work in 2 days. B can do the work alone in

A. 12 days

B. 4 days

C. 8 days

D. 6 days

$A = 2B = 3C$

$A = 6x$, $B = 3x$, $C = 2x$

$A : B : C = x : \frac{x}{2} : \frac{x}{3}$

$= 6 : 3 : 2$ (Days)

$\frac{1}{6x} + \frac{1}{3x} + \frac{1}{2x} = \frac{1}{2}$

$\frac{1+2+3}{6x} = \frac{1}{2} \Rightarrow \frac{6}{6x} = \frac{1}{2} \therefore x = 2$

$B = 3 \times 2 = 6$ days

# MCQ

A contractor undertook to finish a certain work in 124 days and employed 120 men on it. After 64 days, he found that he had already done 2/3rd of the work. How many men he can discharge now so that the work may finish in time.

A 24

B 56

C 64

D 80

$120 \times \frac{64}{60} \times \frac{1}{3} \times \frac{3}{2} = 64$

| Men | Days | Work |
|---|---|---|
| 120 | 64 | 2/3 |
| ? | 60 | 1/3 |

64

$120 - 64 = 56$

# MCQ

A can do $3/4^{th}$ of a work in 12 days. In how many days can he finish $1/8^{th}$ of work?

Work

$\frac{3}{4}$

$\frac{1}{8}$

Days

12

?

$12 \times \frac{1}{8} \times \frac{4}{3}$

$= 2$

A 1 day

B 2 days

C 4 days

D 8 days

**MCQ**

Peter does 75% of work in 12 days. He then calls Charlie for help and they both complete the rest of the work in 3 days. How many days would Charlie have taken to complete the work alone?

A. 18 days

B. 24 days

C. 72 days

D. 48 days

$P \Rightarrow 75\% \leftrightarrow 12$

$100\% \leftrightarrow ?$

$12 \times \frac{100}{75} = 16$ days

Peter's $= \frac{1}{16}$

$C = \frac{1}{x}$

$P + C \Rightarrow$ 12 days

$25\% \Rightarrow 3$

$100\% \Rightarrow ?$

$\frac{1}{16} + \frac{1}{x} = \frac{1}{12}$

$\frac{1}{x} = \frac{1}{12} - \frac{1}{16} = \frac{1}{48}$

$x = 48$

# MCQ

If A is twice as good workman as B and therefore is able to finish a job in 40 days less than B, how many days will it take to finish the same job if A and B work together?

A $28\frac{1}{2}$ days

B 40 days

C $26\frac{2}{3}$ days

D 22 days

$A = 40$ ; $B = 80$

$\frac{1}{40} + \frac{1}{80} = \frac{3}{80}$

$\frac{80}{3} = 26\frac{2}{3}$ days

$A = x$ $B = 2x$

$2x - x = 40$

$x = 40$

# MCQ

Worker A alone can do a piece of work in 6 days and B alone in 8 days. A and B undertook to do it for ₹4000. With the help of worker C, they completed the work in 3 days. How much money will be given to C?

A ₹500

B ₹350

C ₹400

D ₹600

$A = \frac{1}{6}$ ; $B = \frac{1}{8}$ ; $C = \frac{1}{x}$

$A \& B \& C = \frac{1}{6} + \frac{1}{8} + \frac{1}{x} = \frac{1}{3}$

$\Rightarrow \frac{1}{x} = \frac{1}{3} - \frac{7}{24} = \frac{1}{24}$

$\therefore x = 24$

$\frac{1}{8} \times 4000 = 500$

| Days |
| --- |
| A : B : C |
| = 6 : 8 : 24 |
| = 3 : 4 : 12 |
| Efficiency |
| = 4 : 3 : 1 |

**MCQ**

A and B can do a job together in 7 days. A is $1\frac{3}{4}$ times as efficient as B. How long does it take for A to do it alone?

(A) $9\frac{1}{3}$ days

(B) 11 days

(C) $15\frac{1}{2}$ days

(D) $17\frac{1}{3}$ days

$A : B = 1\frac{3}{4} : 1$ (Efficiency)

$= \frac{7}{4} : 1$

$= 7 : 4$

Days $\Rightarrow A : B = 4 : 7$

$A = 4x \Rightarrow 4 \times \frac{11}{4} = 11$ days

$B = 7x$

$A + B = \frac{1}{4x} + \frac{1}{7x} = \frac{1}{7}$

$\Rightarrow \frac{7+4}{28x} = \frac{1}{7}$

$\Rightarrow x = \frac{11}{4}$

# MCQ

A and B can do a work in 10 and 12 days. They start the work and B leaves after three days. If daily wages are Rs. 20 for each how much does A get?

A = $\frac{1}{10}$ B = $\frac{1}{12}$

$\frac{x}{10} + \frac{3}{12} = 1$

$6x + 15 = 60$

$6x = 45$

$x = \frac{45}{6} = \frac{15}{2} = 7.5$

A's wage

$= 7.5 \times 20$

$= 150$

A. 150

B. 90

C. 100

D. 130

# MCQ

12 men can do a work in 15 days working 8 hours a day. In how many days can 9 men do the same work, working 10 hours a day?

| Men | Days | Hrs/day |
|---|---|---|
| 12 | 15 | 8 |
| 9 | ? | 10 |

$$\frac{\cancel{15}^{1}}{\cancel{15}} \times \frac{\cancel{12}^{2}}{\cancel{9}_{3}} \times \frac{\cancel{8}^{2}}{\cancel{10}_{1}} = 16$$

A. 10

B. 16

C. 18

D. 24

# Thank You!

GW Soldiers