gradeup
Sahi Prep Hai Toh Life Set Hai

TIME & WORK
Part-3

*   Leftover Questions
of Time & Work $\longrightarrow$ $(65-70)\,min$

*   Your Personal
Queries

      $\left\{ \begin{array}{l} \text{Syllabus} \\ \text{Preparation} \end{array} \right.$ $\longrightarrow$ $(20-25)\,min$

PRACTICE QUESTIONS

$\dfrac{2}{5}$ A $\rightarrow$ $\dfrac{5}{10}$

Work = 3600

A $\rightarrow$ 25 (144 units)

B $\rightarrow$ 16 (225 units)

C $\rightarrow$ 9 (400 units)

Together $\rightarrow$ 769 units

$\dfrac{769}{1800} \cdot \dfrac{2}{3600}$

Q2. A can do $2/5^{th}$ of a work in 10 days, B can do $3/4^{th}$ of the same work in 12 days and C can do $2/3^{rd}$ of the same work in 6 days. Together they can do $769/1800^{th}$ of the work in:

(a) 3 days (b) 5 days

(c) 2 days (d) 1 days

Ans. (c)

$$A+B \rightarrow 5 \text{days}$$

$$2A + \frac{1}{3}B \rightarrow 3 \text{days}$$

$$(A+B)5 = \left(2A + \frac{1}{3}B\right) \cdot 3$$

$$4B = A$$

$$\frac{A}{B} = \frac{4}{1}$$

Q4. Two workers A and B working together can complete a job in 5 days, If A work twice as efficiently as he actually did and B work 1/3 as efficiently as he actually did, then the work would have been completed in 3 days. A alone can complete the work in how many days?

(a) 6¼

(b) 7½

(c) 10

(d) 12½

$$\frac{2 \text{ Sunits}}{4} = 6\frac{1}{4} \text{ days}$$

Ans. (a)

I logical

$A \rightarrow (x-5)$ days

$B \rightarrow (x \text{ days})$ days

$A+B = 11\frac{1}{9}$ days

$\begin{cases} A \rightarrow 25 \\ B \rightarrow 30 \end{cases}$

$7 \; \underline{12.5}$

Q6. A can do a work in 5 days less than the time taken by B alone to do it. If both of them together take $11\frac{1}{9}$ days, then the time taken by B alone to do the same work (in days) is

PYQ of SSC

(a) 15

(b) 20

(c) 25

(d) 30

Ans. (c)

$A \to X-5$ $\qquad B \to \boxed{X}$ $\qquad A+B \to 11\frac{1}{9} \text{ days}$

Let   work $\to$ 1 unit

$$\boxed{\frac{1}{X-5} + \frac{1}{X} = \frac{9}{100}}$$

$$\frac{1}{20} + \frac{1}{25}$$

$$\boxed{\frac{9}{100}}$$

15

20

25

30

A → 10 days

B → 15 day

A + B → 5 day

Rem   C

6000

A	B	C
600	400	500

Q7. A and B can do a work in 10 days and 15 days respectively. A and B work together for 5 days and remaining work is done by C in two days. If they are paid Rs. 6000 for this work then find the daily income of each.

(a) 300, 250, 300

(b) 600, 400, 500

(c) 200, 300, 400

(d) None of these

Ans. (b)

$$A + B = 350$$

$$A - B = 150$$

$$A = 250 \qquad B = 100$$

	A	B
Wages	250	100
	5 : 2	
Time	2 day :	5 day 3 day

(6 days) (15 days)

Q8. A and B get salary Rs. 350 for completion of a work. A gets Rs. 150 more than B when they are working together. When A and B complete the work separately, then B takes **9 days** more than A. Then find out time taken by both working together ?

(a) 30/13

(b) 30/11

(c) 30/7

(d) can't be determined

Work = 30 unit

$$\frac{30}{7} \text{ day}$$

Ans. (c)

$$A \rightarrow (x+9) \text{ days}$$

$$B \rightarrow (x+4) \text{ days}$$

$$A+B \left\{ \quad C \rightarrow x \text{ days} \right.$$

$$x = \sqrt{9 \cdot 4}$$

$$= 6$$

Q11. A can complete a work in 5 more days than B while A does the same work in 9 more days than C. If A and B can complete the whole work in same time in which C alone does the whole work. In how many days A alone can complete the same work?

(a) 6   (b) 10

(c) 15   (d) 18

Ans. (c)

Q15. 3 typists P, Q and R are working simultaneously can type 216 pages in 4 hours. In one hour R can type as many pages more than Q as Q can type more than P. R can type as many pages in 5 hours as P in 7 hours. How many pages does each of them type per hour?

(a) 15, 18, 21

(b) 16, 18, 20

(c) 14, 18, 22

(d) Can not be determined

$$P + Q + R = 54 \, pg/hr \quad —(1)$$

$$R - Q = Q - P$$

$$P + R = 2Q \quad —(2)$$

$$3Q = 54 \qquad Q = 18 \, pg/hr$$

$$P + R \longrightarrow 36 \, pgs/hr$$

$$5R = 7P$$

$$\frac{R}{P} = \frac{7 \, units}{5 \, units}$$

$$12 \, units \longrightarrow 36 \, pg$$

$$1 \, unit \longrightarrow 3 \, pg$$

$$R \longrightarrow 21 \, pg/hr \qquad P \longrightarrow 15 \, pg/hr$$
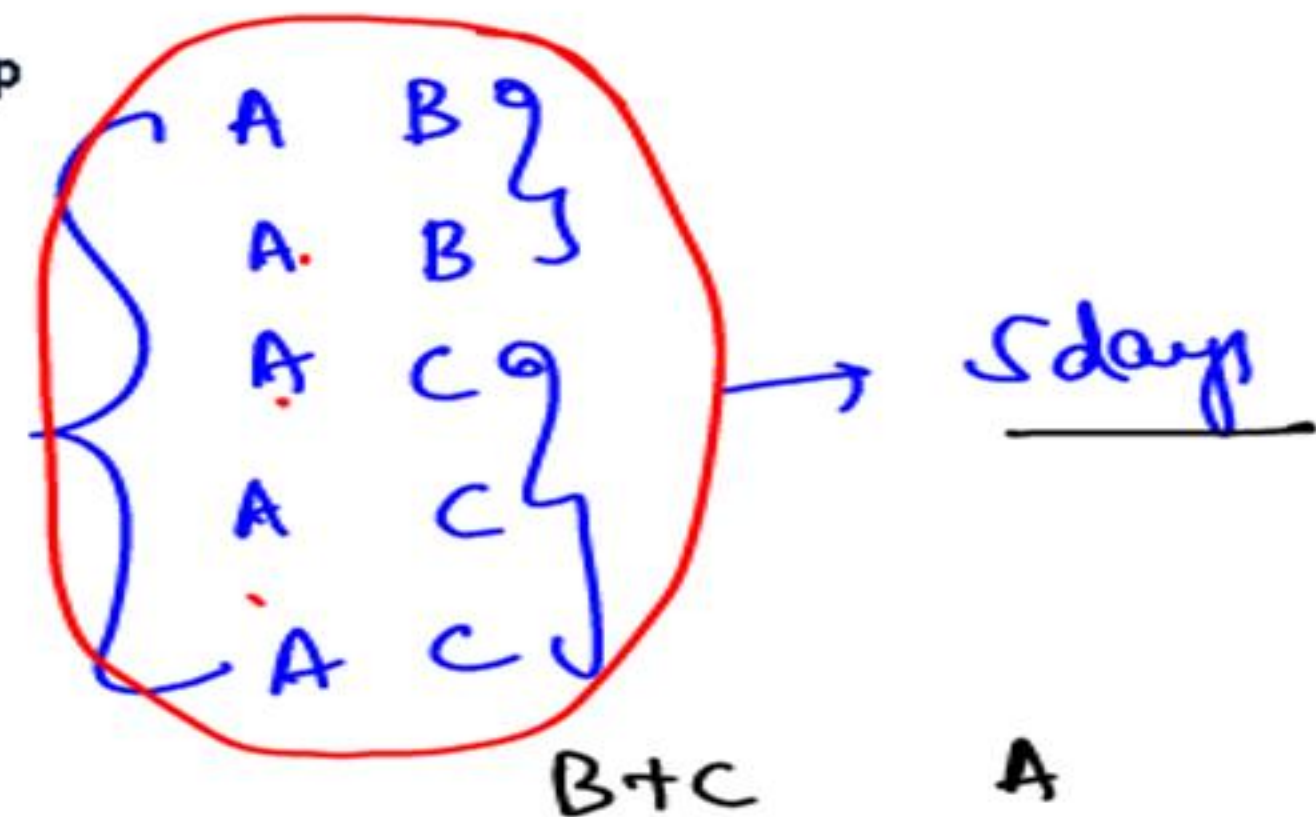
Ans. (a)

Homework

Q18. A monkey ascends a greased pole 60 metres high. He ascends 5 metres in the first minute and then slips down 4 metres in the alternate minute. If this pattern continue until he climbs the pole, in how many minutes would he reach at the top of the pole.
(a) 120 min.
(b) 113 min.
(c) 111 min.
(d) 114 min.

Ans. (c)

Q19. 3 men A, B and C complete a work in such a way that A works for all the days, B works for 1st & 2nd day and C works for 3rd, 4th and 5th day and the work is completed in 5 days. If B and C can do as much work in 2 days as A alone does in 3 days. In how many days A, B and C alone do the work if B and C can complete the whole work without the help of A in 6 days?

(a) 9, 9, 18   (b) 9, 18, 9
(c) 18, 9, 9   (d) 9, 12, 9

A   B }
A.   B }
A   C } → 5 days
A   C }
A   C }

Time   B+C   A
              2day: 3 days
Work   3 units :   2 units

Total work → 18 units

A → 9 days

$5A + 2B + 3C = 18$
$10 + 2B + 3C = 18$

2. $2B + 3C = 8$ $B=1$ $C=2$
   $B + C = 3$

Ans. (b)

$A \rightarrow 4 \text{ days}$ (8 unit)

$B \rightarrow 8 \text{ days}$ (4 units)

$\dfrac{\text{Work}}{} = 32$

$C \rightarrow 16 \text{ days}$ (2 units)

$D \rightarrow 32 \text{ day}$ (1 unit)

$\text{I}^{st} \qquad \text{II}^{nd}$

Time $\quad 2 \quad : \quad 3$

work $\quad \boxed{3} : \boxed{2}$

units

Q22. A can complete a piece of work in 4 days B takes double the time taken by A, C takes double that of B and D takes double that of C to complete the same work. They are paired in groups of two each. One pair takes two-thirds time needed by the second pair to complete the work. Which is the <u>first pair?</u>

(a) A & B

(b) A & C

(c) B & C

(d) A & D

5 units $\rightarrow$ 15

$1 \rightarrow 3$

$\dfrac{3}{15} \times 15$

3

= 9 unit

Ans. (d)

$A \to 6000 \text{ pens}/hr$

$B \to 3000 \text{ pen}/hr$

$C \to 4000 \text{ pen}/hr$

$A \to \frac{1}{2}(3000)$

$B \to \frac{1}{2}(1500)$

$\to C \to \frac{1}{2}(2000)$

A

B

C

Q23. 3 men, A, B and C can make 12 thousand pens in 2 hrs, 4 hrs and 3 hrs. respectively. If they work half hour every time, but they do not work together and A starts the work first then find in how much time they will make 18500 pen.

(a) 4 hrs.　　　　　　　(b) 4 hrs. 15 min.
(c) 4 hrs. 30 min.　　(d) 4 hrs. 45 min.

15 min

$1\frac{1}{2}$ hrs $\to$ 6500 pen

$1\frac{1}{2}$ hrs $\to$ 6500 pen

1 hr $\to$ 4500 pen

17500 pens

Ans. (b)

v-any

Q25. 3 men A, B and C working together can do a job 6 <u>hours less</u> time than A alone did, 1 hour less time than B alone and half the time needed by C. In how many hours will (A + B) together finish the work.

(a) 20/3   (b) 3/4

(c) 3/2   (d) 4/3

$(A + B + C) \longrightarrow x\ hy$

$A \longrightarrow (x+6)h$

half $\begin{cases} B \longrightarrow (x+1)h \\ \\ C \longrightarrow \boxed{(2x)\ h} \end{cases}$

half $\dfrac{C}{A+B}$

$\dfrac{1}{x+6} + \dfrac{1}{x+1} = \dfrac{1}{2x}$

$\dfrac{2x+7}{x^2+7x+6} = \dfrac{1}{2x}$

$x^2 + 7x + 6 = 4x^2 + 14x$

PYQ of SSC

$3x^2 + 7x - 6 = 0$

$x = -3, \boxed{2/3}$

Ans. (d)

*

$$1 + 2 + 3 + 4 + ---- n = \frac{n(n+1)}{2}$$

g $\quad 1 + 2 + 3 + --- 15$

$$\longrightarrow \quad \frac{15 - 16^{8}}{2} \longrightarrow 120$$

Let there are n

$$\left(n + n-1 + (n-2) + \cdots 3 + 2 + 1\right)$$

$$= \quad n \cdot \frac{2}{3} n$$

$$\frac{n(n+1)}{2} = n \cdot \frac{2}{3} n$$

$$3n + 3 = 4n$$

$$\boxed{n = 3}$$

Q26. A group of workers was put on a job from the second day onwards, one worker was withdrawn each day. The job was finished when the last worker was withdrawn. Had <u>no</u> <u>worker been withdrawn at any</u> <u>stage</u>, the group would have finished the <u>job in two-third of the</u> time. How many workers were there in the group?

(a) 2

(b) 3

(c) 5

(d) 11

Ans. (b)

Q27. A, B and C can complete a job in 10 days, if C had worked only for first 3 days. The work done in first 3 days is 37/100 of total work allotted also, the work done by A in 5 days is equal to work done by B in 4 days. How many days would be required by the fastest worker to complete entire work?

(a) 20 days

(b) 25 days

(c) 30 days

(d) 40 days

Ans. (a)

Arithmetic   Progression

Q30. 150 workers were engaged to finish a piece of work in a certain number of days. Four workers dropped on the second day, four more workers dropped on third day and so on. It takes 8 more days to finish the work now. Find the number of days in which the work was completed.

(a) 17   (b) 25

(c) 24   (d) 16

Ans. (b)

* <u>You</u> <u>Queries</u>

* <u>Doubts</u> (Question of QA)

$$\rightarrow \text{ Grade up app}$$
$$\rightarrow \text{ Telegram}$$

** <u>11am</u> $\rightarrow$ Paid batch (Eng)

Free series (<u>Mon</u> $\Rightarrow$ <u>Sat</u>)   <u>Maxima</u> | <u>Minima</u> of
1pm – 2pm   Trigonometric Funcⁿ

Free session 9pm – 10pm $\rightarrow$ <u>Youtube</u> (<u>Mix Question</u>)

* Aditya → <u>Management</u>

* Abhishek → <u>Revision</u> (v. imp)

→ How to

$\left\{\begin{array}{l}\text{\underline{Strategy} for Beginners?} \\ \text{Strategy for Repeaters}\end{array}\right.$

* Puja → <u>Speed</u>

$\left\{\begin{array}{l}\text{(i) Practice} \\ \text{(ii) Calculation speed} \\ \text{(iii) \underline{Options} or Alternate approach}\end{array}\right.$ $\left\{\begin{array}{l}\text{(iv) Approx} \\ \text{(v) \underline{Unit digit}}\end{array}\right.$

* Supriya → Practical Target

→ (Classes + Quizzes)   First Priority

* Bijen → { Syllabus

Min 60% ⟷ { Classes + Quizzes }

↳ Youtube + Mix Question ?

Puja → Calculation Series

gradeup

Sahi Prep Hai Toh Life Set Hai

Practise
topic-wise quizzes

Keep attending
live classes

GET IT ON
Google Play

Continuity $\longrightarrow$ Why you are prepairing

Anamika $\longrightarrow$ (Working People)