TIME & WORK (CAT QUANTS QUESTIONS)- Area TEST 2

1. A person can do a job in 15 days. His Uncle takes 12 days and his friend finishes it in 60 days. How long will they take to complete the job if they all work together?

1. Less than 6 days	2. Exactly 6 days
3. More than 6 days	4. Exactly 10 days

2. A punctured tyre can deflate in 12 min. while a pumping machine takes 3 minutes to completely inflate a tyre. What will be the time taken to inflate the tyre when both the leak and pump are working together?

1. 5 minutes	2. 6 minutes	3. 7 minutes	4. None of these

- 3. A tank is filled by a pipe A in 20 min. and pipe B in 30 min. When filled, it can be emptied by pipe C in 10 minute. If all the three pipes are opened simultaneously, 2/3rd of tank will be filled in
 - 1. 15 min 2. 25 min 3. 10 min 4. None of these
- 4. A man can complete 3/8 of a work in 24 days. At this rate, how much more time is required to complete the work?

 1. 40 days
 2. 15 days
 3. 64 days
 4. None of these

- 5. A can do a work in 10 days and B in 25 days. If they work on it together for 5 days, then the fraction of the work that is left is:
 - 1. $\frac{1}{4}$ 2. $\frac{1}{10}$ 3. $\frac{7}{10}$ 4. $\frac{3}{10}$
- 6. Sumit can do a work in 6 days while Deepak can do the same work in 4 days. Both of them finish the work together and get Rs. 300. What is the share of Sumit?

1. Rs. 30 2. Rs. 60 3. Rs. 90 4. Rs. 120

- 7. 5 identical kilns can produce a total of 300 bricks per minute by running at a constant rate. How many bricks could 10 such kilns produce in 5 minutes?
 - 1. 10002. 18003. 30004. 3600
- 8. P can do a piece of work in 16 days. P undertook to do it for Rs. 400. With the help of Q, he finishes the work in 12 days. P's share is

1. Rs. 80 2. Rs. 125 3. Rs. 100 4. Rs. 120

9.	A can finish a job in 15 days and B can do the same work in 18 days. A worked for 10 days and left the job. In how many days, B alone can finish the remaining work?					
	1. 5 days	2. 6 days	3.	5.5 days	4. 8 days	
10.	A can do a piece of work in 24 days and B can do the same piece of work in 36 days. A and B together complete the same piece of work and get Rs. 2000 as the combined wages. A's share of the wage will be					
	1. Rs. 800	2. Rs. 900	3.	Rs. 1000	4. Rs. 1200)
11.	If 8 cows can be give 80 litres of milk in 8 days, then 1 cow will give 1 litre of milk in how many days at the same rate?					
	1. 1	2.8	3.	4	4.64	
12.	A tap can fill a cist are opened simulta	ern in 10 minute aneously, then th	s. Another tap e cistern will b	o can empty it in pe filled in	15 minutes. If b	oth the taps
	1. 40 minutes	2. 60 minute	es 3.	30 minutes	4. 15 minu	tes
13.	X is thrice as good a workman as Y and therefore is able to finish a job in 60 days less than Y. What is the time taken to do twice the work when they are working together ?					
	1. 45 days	2. 22.5 days	3.	25 days	4. 30 days	
14.	A pipe can fill a tank in 10 min. There is a leak which can empty the tank in 30 min. When both these are working together, the tank would be filled in					
	1. 30 min	2. 25 min	3.	15 min	4. 40 min	
15.	Some students can complete an assignment in 12 days. How many days will be taken by two times the number of such students for 1/3rd of this assignment ?					
	1. 6 days	2. 4 days	3.	3 days	4. 2 days	
	-	TIN				
1 2	2 4	3 3	4 1	5 4	64	73
<u>1.</u> 2 8. 2	9.2	10.4	11.2	12.3	13.1	14.3
15.4	5.2		/=			

TIME	& WORK – Area Test 2
1.	1 day's work of the three persons
	$\begin{pmatrix} 1 & 1 & 1 \end{pmatrix}$ 10
	$\left[= \left(\frac{15}{15} + \frac{12}{12} + \frac{1}{60} \right) = \frac{1}{60} \right]$
	60
	So all the three together will complete the work in $\frac{10}{10}$ = 6 days
2	
-	$\left(\frac{1}{2} - \frac{1}{12}\right) = \frac{3}{12}$
	Work done in 1 minute = $\begin{pmatrix} 3 & 12 \end{pmatrix} = 12$
	Time taken to inflate the tyre when both the leak and pump are working together = $12/3 = 4$ minutes.
3.	$\frac{1}{1+1} + \frac{1}{1-1} - \frac{1}{3+2-1} = \frac{4}{4}$
	One minute work of three pipes = $20 30 10 = 60 60$
	$\frac{60}{2}$
	\Box They will fill the full tank in = 4 = 15 min
	2
	They will fill $\frac{3}{3}$ rd of the tank = 2/3 X15 = 10 min.
4.	Work done = $3/8$, Balance work = $1 - 3/8 = 5/8$
	More work, more time (Direct proportion)
	Thus, remaining work 5/8 th can be completed in 24/(3/8) X (5/8) = 40 days
5.	1 1
	A's 1 day work = 10 ; B's 1 day work = 25 ,
	$\begin{pmatrix} 1 & 1 \end{pmatrix}$ 7
	$(A + B)'s \ 1 \ day's \ work = \left(\frac{10}{10} + \frac{1}{25}\right)^{-1} = \frac{1}{50}$
	(7 -) 7
	$\left(\frac{1}{50} \times 5\right) = \frac{1}{10}$
	(A + B) S 4 ddy S work = (A + B) S 4 ddy S a d
	$\left(1-\frac{7}{10}\right)=\frac{3}{10}$
	$\Box \text{Remaining work} = \begin{pmatrix} 10 \end{pmatrix} 10$
6.	Sumit's wages : Deepak's wages
	$\frac{1}{2}:\frac{1}{2}=2:3$
	= Sumit's 1 day's work : Deepak's 1 day's work = $6 4$
	$\left(\frac{2}{2}\times 300\right)$
	Sumit's share = Rs. $\begin{pmatrix} 5 \\ 5 \end{pmatrix}$ = Rs. 120
7.	Let the required number of bricks be B.
	More kilns, more bricks (Direct proportion)
	More time, more bricks (Direct proportion)
	Thus, 5X1XB = 10X5X300 or, B = 10X5X300/5 or, B = 3000
8.	$\frac{1}{1}$ $\frac{1}{1}$ $\frac{1}{1-1}=\frac{1}{1}$
	$(P+Q)$'s 1 day's work = 12, P's 1 days' work = 16 \therefore Q's 1 days' work = 12, 16, 48
	$1 1 (1 \times 500)$
	\therefore Money should be divided in the ratio = $\overline{16}$: $\overline{48}$ = 3 : 1 \therefore B gets = Rs. $\left(\overline{4}^{\times 300}\right)$ = Rs. 125
9.	A's 10 days work = $(1/15)X10 = 2/3$, thus remaining work = $1 - 2/3 = 1/3$
	Now, 1/18 work is done by B in 1 day.
	Therefore, remaining $1/3^{rd}$ of work is done by B in (18 X 1/3) = 6 days.

10.	1 1				
	A's 1 day's work = $\overline{24}$, B's 1 day's work = $\overline{36}$				
	\therefore Ratio of A and B's share = $24 \cdot 36 = 3:2$				
	$3 \times 2000 = 3 \times 2000 = R_{\rm S}$ 1200				
	Hence, A's share in a combined wage of Rs. 2000 = Rs. $\frac{3+2}{3+2} \times \frac{2000}{5} = \text{Rs.} \frac{5}{5}$				
11.	Let the required number of days be A. Then				
	Less cows, more days (Indirect proportion)				
	Less milk, less days (Direct proportion)				
	Thus, 1X8XA = 8X1X8 or, A = 8				
12.	1 1_1				
	If both taps are opened, cistern filled in one minute = $\frac{10}{10} - \frac{15}{15} = \frac{30}{30}$				
	Therefore, full cistern will be filled in 30 minutes.				
13.	Ratio of time taken by A and B = 1 : 3				
	If difference of time taken is 2 days, then B takes 3 days.				
	If difference of time taken is 60 days, then B takes $(3/2)X60 = 90$ days.				
	So A takes 30 days to complete the work.				
	A and B can together complete twice the work In $2X30X90/(30+90) = 45$ days.				
14.	1 1 2				
	If both pipes are working, then the tank filled in 1 minute = $\frac{10}{10} - \frac{10}{30} = \frac{10}{30}$				
	Therefore, full tank will be filled in $30/2 = 15$ minutes.				
15.	Let 'a' students can do the assignment in 12 days and let the required number of days be 'b'.				
	More men, less days (Indirect proportion)				
	Less work, less days (Direct proportion)				
	Thus, (2a)x1xb = ax1/3x12 or, 2ab = 4a or, b = 2.				

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