# TIME \& WORK BASED QUANTITATIVE APTITUDE PRACTICE QUESTIONS AND ANSWERS PDF WITH EXPLANATION <br> <br> For All Competitive SSC, Bank, IBPS, UPSC, <br> <br> For All Competitive SSC, Bank, IBPS, UPSC, Railway, IT Interviews \& Other Govt. Exams 

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Q1. A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is $54 \mathrm{~km} / \mathrm{h}$, find the length of the platform.
a) 240 metres
b) 258 metres
c) 220 metres
d) None of these

Q2. George takes 8 hours to copy a 50 page manuscript while Sonia can copy the same manuscript in 6 hours. How many hours would it take them to copy a 100 page manuscript, if they work together?
a) $6 \frac{6}{7}$
b) $9 \frac{5}{7}$
c) 9
d) 14
e) None of these

Q3. 4 goats or 6 sheep can graze a field in 50 days. 2 goats and 3 sheep will graze it in
a) 100 days
b) 200 days
c) 150 days
d) 50 days

Q4. A can finish a work in 15 days, $B$ in 20 days and $C$ in 25 days. All these three worked together and earned Rs.4700. The share of $C$ is
a) Rs. 1800
b) Rs. 1200
c) Rs. 1500
d) Rs. 2000

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Q5. If one man or two women or three boys can do a piece of work in 55 days, then one man, one woman and one boy will do it how many days?
a) 40 days
b) 20 days
c) 30 days
d) 50 days

Q6. A contractor undertook to do a piece of work in 9 days. He employed certain number of laboures but 6 of
them were absent from the very first day and the rest could finish the work in only 15 days. Find the number of men originally employed.
a) 15
b) 13
c) 6
d) 9

Q7. A does a work in 10 days and $B$ does the same work in 15 days. In how many days they together will do the same work?
a) 5 days
b) 8 days
c) 6 days
d) 9 days

Q8. A worker is paid Rs 56 for 35 hour in a week. Up to 40 hours, he is paid at the normal rate and on overtime, 1.5 times the normal. How many hours did he work to get Rs 88 ?
a) 48 hours
b) 58 hours
c) 50 hours
d) 55 hours
e) 60 hours

Q9. Four taps can individually fill a cistern of water in 1 h , $2 h, 3 h$ and $6 h$, respectively. If all the four taps are opened
simultaneously, the cistern can be filled in how many minutes?
a) 35
b) 20
c) 30
d) 40

Q10. How many men will be required to plough 100 acres of land in 10 days, if 10 men require 8 days to plough 20 acres of land?
a) 50
b) 30
c) 40
d) 60

Q11. If 5 engines consume 6 metric tonnes of coal when each is running 9 hours a day, how many metric tonnes of coal will be needed for 8 engines, each running 10 hours a day, it being given that 3 engines of the former type consume as much as 4 engines of the latter type?
a) 8
b) $8 \frac{8}{9}$
c) $3 \frac{1}{8}$
d) $6 \frac{12}{25}$
e) None of these

Q12. A train $X$ starts from Meerut at 4 p.m. and reaches Ghaziabad at 5 p.m. while another train $Y$ starts from Ghaziabad at 4 p.m. and reaches Meerut at 5.30 p.m. The two trains will cross each other at :
a) $4.36 \mathrm{p} . \mathrm{m}$
b) $4.48 \mathrm{p} . \mathrm{m}$.
c) $4.42 \mathrm{p} . \mathrm{m}$.
d) $4.50 \mathrm{p} . \mathrm{m}$.

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Q13. 18 men can earn Rs. 360 in 5 days. How much money will 15 men earn in 9 days ?
a) Rs. 480
b) Rs. 600
c) Rs. 540
d) Rs. 360

Q14. A man sitting in a train which is travelling at 50 kmph observes that a goods train, travelling in opposite direction, takes 9 seconds to pass him. If the goods train is 280 m long, find its speed.
a) 62 kmph
b) 52 kmph
c) 58 kmph
d) None of these

Q15. A man completes $\frac{5}{8}$ of a job in 10 days. At this rate, how many more days will it take him to finish the job?
a) 6
b) 7
c) 5
d) $7 \frac{1}{2}$
e) None of these

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## Answers to the above questions :

## Q1. Answer: (a)

Speed of train $=54 \mathrm{~km} / \mathrm{h}=54 \times \frac{5}{18} \mathrm{~km} / \mathrm{h}=15 \mathrm{~m} / \mathrm{s}$
Let the length of train $=L_{t} \mathrm{~m}$
and the length of platform $=L_{p} \mathrm{~m}$
Now, $15=\frac{L_{t}+L_{p}}{36} \ldots$
and $15=\frac{L_{t}}{20}$
\&thre4; $L_{t}=300 \mathrm{~m}$
$\therefore \mathrm{By}(\mathrm{i}), \frac{300+L_{p}}{36}=15$
$\Rightarrow L_{p}=240 \mathrm{~m}$

## Q2. Answer: (a)

In an hour, George and Sonia together can copy
$\frac{1}{6}+\frac{1}{8}=\frac{7}{24}$ of a 50 -page manuscript.
i.e. In an hour they together can copy $\frac{7}{48}$ of the 100 -page manuscript.
i.e. They together can copy a 100-page manuscript in $\frac{48}{7}$ hours, i.e. $6 \frac{6}{7}$ hours.

## Q3. Answer: (d)

Using the formula, $\left(\frac{A N D}{O R}\right) x=$ given number of days, where x is the number of days we have to divide.

Thus,

$$
\begin{aligned}
& \left(\frac{A N D}{O R}\right) x=50 \Rightarrow\left(\frac{2}{4}+\frac{3}{6}\right) \mathrm{x}=50 \\
& \Rightarrow\left(\frac{1}{2}+\frac{1}{2}\right) \mathrm{x}=50 \Rightarrow \mathrm{x}=50
\end{aligned}
$$

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## Q4. Answer: (b)

A's one day work $=\frac{1}{15}$
B's one day work $=\frac{1}{20}$
C's one day work $=\frac{1}{25}$
$A, B$ and $C$ worked together one day work
$=\frac{1}{15}+\frac{1}{20}+\frac{1}{25}$
$=\frac{20+15+12}{300}=\frac{47}{300}$
time taken to complete work by $\mathrm{A}, \mathrm{B}$ and C working together $=\frac{300}{47}$
$\therefore$ Share of $C=\frac{1}{25} \times \frac{300}{47} \times 4700=$ Rs. 1200

## Q5. Answer: (c)

1 man = 2 women = 3 boys
$\therefore 1$ man +1 woman +1 boy
$=3$ boys $+\frac{3}{2}$ boys +1 boy
$\therefore$

Boys Days
$\frac{11}{2} \mathrm{x}$
$M_{1} D_{1}=M_{2} D_{2}$
$\Rightarrow 3 \times 55=\frac{11}{2} \times D_{2}$
$D_{2}=\frac{3 \times 55 \times 2}{11}=30$ days

## Q6. Answer: (a)

Let the number of men originally employed be x .
$9 x=15(x-6)$
or $x=15$

## Q7. Answer: (c)

A's 1 day's work $=\frac{1}{10}$ and B's 1 day's work $=\frac{1}{15}$
$\therefore(A+B)$ 's 1 day's work $=\left(\frac{1}{10}+\frac{1}{15}\right)=\frac{1}{6}$.
So, both together will finish the work in 6 days.Alternate Method :-
$A$ and $B$ together finish the work in $\left(\frac{10 \times 15}{10+15}\right)=6$ days

## Q8. Answer: (c)

Let the worker worked for $(40+x)$ hours.
Now, $\frac{56}{35} \times 40+\frac{x \times 1.5 \times 56}{35}=88$ or $2.4 \mathrm{x}=24$
$\Rightarrow x=10$ hours
The worker worked for $(40+10)=50$ hours

## Q9. Answer: (c)

Required time $=\frac{1}{\frac{1}{1}+\frac{1}{2}+\frac{1}{3}+\frac{1}{6}}=\frac{6}{6+3+2+1}$
$=\frac{6}{12} h=\frac{6}{12} \times 60 \mathrm{~min}=30 \mathrm{~min}$

## Q10. Answer: (c)

Here, $M_{1}=10, D_{1}=8, W_{1}=20$
$M_{2}=x(l e t), D_{2}=10, W_{2}=100$
$\because \frac{M_{1} D_{1}}{W_{1}}=\frac{M_{2} D_{2}}{W_{2}}$
$\therefore \frac{10 \times 8}{20}=\frac{x \times 10}{100} \Rightarrow \mathrm{x}=8 \times 5=40$

## Q11. Answer: (a)

Let the required quantity of coal be x metric tonnes.
More engines, More coal (Direct Proportion)

More hours per day, More work (Direct Proportion)
More rate, More coal (Direct Proportion)

$$
\begin{aligned}
& \text { Engines } 5: 8 \\
& \text { Hours per day } 9: 10:: 6: \mathrm{x} \\
& \text { Rate } \quad \frac{1}{3}: \frac{1}{4} \\
& \therefore\left(5 \times 9 \times \frac{1}{3} \times x\right)=\left(8 \times 10 \times \frac{1}{4} \times 6\right) \\
& \Leftrightarrow 15 \mathrm{x}=120 \Leftrightarrow \mathrm{x}=8 .
\end{aligned}
$$

Suppose, the distance between Meerut and Ghaziabad is x km.
Time taken by $Y$ to cover $x \mathrm{~km}=\frac{3}{2}$ hours.
$\therefore$ Speed of $X=x$ kmph, Speed of $Y=\left(\frac{2 x}{3}\right) \mathrm{kmph}$.
Let them meet y hours after 4 p.m. Then,
$\mathrm{xy}+\frac{2 x y}{3}=x \Rightarrow y\left(1+\frac{2}{3}\right)=1 \Rightarrow y=\frac{3}{5}$ hours
$=\left(\frac{3}{5} \times 60\right) \mathrm{min}=36 \mathrm{~min}$.
So, the two trains meet at 4.36 p.m.

## Q13. Answer: (c)

$\frac{M_{1} D_{1}}{W_{1}}=\frac{M_{2} D_{2}}{W_{2}}$
$\Rightarrow$ Here $M_{1}=18, D_{1}=5, W_{1}=$ Rs 360
$M_{2}=15, D_{2}=9, W_{2}=?$
$\Rightarrow 18 \times 5 \times W_{2}=15 \times 9 \times 360$
$\therefore W_{2}=\frac{15 \times 9 \times 360}{18 \times 5}=$ Rs. 540

Q14. Answer: (a)
Relative speed $=\left(\frac{280}{9}\right) \mathrm{m} / \mathrm{sec}=\left(\frac{280}{9} \times \frac{18}{5}\right) \mathrm{kmph}=112 \mathrm{kmph}$.
$\therefore$ Speed of goods train $=(112-50) \mathrm{kmph}=62 \mathrm{kmph}$.

## Q15. Answer: (a)

Work done $=\frac{5}{8}$
Balance work $=\left(1-\frac{5}{8}\right)=\frac{3}{8}$

Less work, Less days (Direct Proportion)
Let the required number of days be x .
Then, $\frac{5}{8}: \frac{3}{8}:: 10: x \Leftrightarrow \frac{5}{8} \times x=\frac{3}{8} \times 10 \Leftrightarrow x=\left(\frac{3}{8} \times 10 \times \frac{8}{5}\right)=6$.

