TIME & WORK BASED QUANTITATIVE APTITUDE PRACTICE QUESTIONS AND ANSWERS PDF WITH EXPLANATION

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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 km/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) 6⁶/₇
b) 9⁵/₇
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



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 1h, 2h, 3h and 6h , 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 p.m
- b) 4.48 p.m.
- c) 4.42 p.m.
- d) 4.50 p.m.



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

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 km/h = 54 ×
$$\frac{5}{18}$$
 km/h = 15 m/s
Let the length of train = L_t m
and the length of platform = L_p m
Now, $15 = \frac{L_t + L_p}{36}$...(i)
and $15 = \frac{L_t}{20}$
&thre4 L_t = 300 m
 \therefore By (i), $\frac{300 + L_p}{36} = 15$
 $\Rightarrow L_p = 240$ 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, $\left(\frac{AND}{OR}\right)x$ = given number of days, where x is the number of days we have to divide.

Thus,

$$\left(\frac{AND}{OR}\right)x = 50 \Rightarrow \left(\frac{2}{4} + \frac{3}{6}\right)x = 50$$

$$\Rightarrow \left(\frac{1}{2} + \frac{1}{2}\right) \mathbf{x} = 50 \Rightarrow \mathbf{x} = 50$$

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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 A, B and C

working together =
$$\frac{300}{47}$$

:. Share of C =
$$\frac{1}{25} \times \frac{300}{47} \times 4700$$
 = Rs.1200

Q5. Answer: (c)

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

Boys Days

$$3\uparrow 55\downarrow$$

$$\frac{11}{2} \times$$

$$M_1D_1 = M_2D_2$$

$$\Rightarrow 3 \times 55 = \frac{11}{2} \times D_2$$

$$D_2 = \frac{3 \times 55 \times 2}{11} = 30 \text{ days}$$

Q6. Answer: (a)

Let the number of men originally employed be x.

9x = 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 = $\frac{1}{15}$

: (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 $2.4x = 24$

 $\Rightarrow x = 10$ hours

The worker worked for (40 + 10) = 50 hours

Q9. Answer: (c)

Required time =
$$\frac{1}{\frac{1}{1} + \frac{1}{2} + \frac{1}{3} + \frac{1}{6}} = \frac{6}{6 + 3 + 2 + 1}$$

= $\frac{6}{12}h = \frac{6}{12} \times 60$ min = 30 min

Q10. Answer: (c)

Here,
$$M_1 = 10$$
, $D_1 = 8$, $W_1 = 20$
 $M_2 = x(let)$, $D_2 = 10$, $W_2 = 100$
 $\therefore \frac{M_1 D_1}{W_1} = \frac{M_2 D_2}{W_2}$
 $\therefore \frac{10 \times 8}{20} = \frac{x \times 10}{100} \Rightarrow x = 8 \times 5 = 40$

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)

6

More rate, More coal (Direct Proportion)

Engines 5:8

Hours per day 9:10 :: 6:x

Rate

$$\therefore \left(5 \times 9 \times \frac{1}{3} \times x\right) = \left(8 \times 10 \times \frac{1}{4} \times 10^{-1}\right)$$

 $\frac{1}{3}:\frac{1}{4}$

⇔15x = 120⇔x = 8.

Q12. Answer: (a)

Suppose, the distance between Meerut and Ghaziabad is x km.

Time taken by Y to cover x km = $\frac{3}{2}$ hours.

$$\therefore$$
 Speed of X = x kmph, Speed of Y = $\left(\frac{2x}{3}\right)$ kmph.

Let them meet y hours after 4 p.m. Then,

$$xy + \frac{2xy}{3} = x \Rightarrow y\left(1 + \frac{2}{3}\right) = 1 \Rightarrow y = \frac{3}{5} \text{ hours}$$
$$= \left(\frac{3}{5} \times 60\right) \text{ min} = 36 \text{ min.}$$

So, the two trains meet at 4.36 p.m.

Q13. Answer: (c)

$$\frac{M_1D_1}{W_1} = \frac{M_2D_2}{W_2}$$

$$\Rightarrow \text{Here } M_1 = 18, D_1 = 5, W_1 = \text{Rs.360}$$

$$M_2 = 15, D_2 = 9, W_2 = ?$$

$$\Rightarrow 18 \times 5 \times W_2 = 15 \times 9 \times 360$$

$$\therefore W_2 = \frac{15 \times 9 \times 360}{18 \times 5} = \text{Rs. 540}$$

Q14. Answer: (a)

Relative speed = $\left(\frac{280}{9}\right)$ m/sec = $\left(\frac{280}{9} \times \frac{18}{5}\right)$ kmph = 112 kmph.

 \therefore Speed of goods train = (112 – 50) kmph = 62 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,
$$\frac{5}{8}: \frac{3}{8}: :10: x \Leftrightarrow \frac{5}{8} \times x = \frac{3}{8} \times 10 \Leftrightarrow x = \left(\frac{3}{8} \times 10 \times \frac{8}{5}\right) = 6.$$

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