Time and Work question and answers for Railway Exams PDF

Instructions

For the following questions answer them individually

Question 1

A and B can complete a piece of work in 6 and 12 days separately. If they work jointly, how long will they take to complete this piece of work ?

A 9 days

B 18 days

C 6 days

D 4 days

Answer: D

Explanation:

Time taken when they work together = $\frac{1}{\frac{1}{6}+\frac{1}{12}}$

= 4 days

Question 2

A certain job was assigned to a group of men to do in 20 days. But 12 men did not turn up for the job and the remaining men did the job in 32 days. The original number of men in the group was-

A 32

B 34

C 36

D 40

Answer: A

Explanation:

Let there be x men initially. They were supposed to complete the work in 20 days.

When 12 men didn't show up the work was done in 32 days

So, x- 12 men did the work in 32 days

But x-12 men were supposed to take 20x/ (x-12) days

So, 20 x/ (x-12) = 32

so,

x = 32

Question 3

A certain number of men can do a work in 60 days. If there were 8 men more, it could be finished in 10 days less. How many men were there in the begining ?

A 40

B 35

C 45

D 50

Answer: A

Explanation:
Let there be x men in the group who can finish the work in 60 days.

X+ 8 men can finish the work in 50 days.

but x + 8 men take 60x/ (x+8) days

60x/ (x+8) = 50

So, x = 40

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Question 4

12 men and 18 boys working $7\frac{1}{2}$ hours a day can do a certain work in 60 days. If one man works equal to 2 boys, then the number of boys required to help 21 men to do twice the work in 50 days, working 9 hours a day, will be--

A 30

B 42

C 48

D 90

Answer: B

Explanation:
2 boys = 1 man

So, 21 men can do work W is 60 days working 7.5 hours per day.

to do 2W, 42 men are needed.

To do the job in 50 days, 60 x 42 / 50 men are needed.

To do the job working 9 hours a day, 7.5/9 x 60 x42/50 men are needed

= 42 men

We only have 21 men so, we get 42 extra boys to get the work needed for the 21 extra men.

Question 5

In each castle, there is provision of food for 150 men for 50 days. After 20 days 50 men leave the castle. The remaining food will last for:

A 40 days

B 45 days

C 42 days

D 50 days

Answer: B

Explanation:
Let the quantum of food be 1500 units.

Food lasts for 50 days for 150 men.

After 20 days, 2/5th of the food is over.

So, units of food left = 900

1500 units 50days 150 men

900units ?days 100 men

? = 900/1500x50x 150/100 = 45 days

Question 6

Hari can do a piece of work in 30 days while giri can do the same work in 20 days working together they complete the work for which they are paid Rs 1000 in total.What is Hari's share ?

A Rs 400

B Rs 500

C Rs 600

D Rs 300

Answer: A

Explanation:
Let the total units of work be 300.

Hari's speed = 300/30 = 10 units/ day

Giri's speed = 300/20 = 15 units/day

So, Hari's share of the total amount = 1000* 10/25 = 400 Rs

Question 7

12 men can do a piece of work in 10 days. How many men would be required to do the same work in 8 days ?

A 14

B 18

C 16

D 15

Answer: D

Explanation:
12 men can do a work in 10 days

How many men are needed to complete the work in 8 days

= 12 x 10 / 8 = 15

Question 8

A certain number of men can do a work in 60 days. If there were 8 men more it could be finished in 10 days less. How many men were there in the beginning ?

A 40

B 35

C 45

D 50

Answer: A

Explanation:
Let there be m men originally to work in 60 days

If the men were m + 8, the work would be completed in 50 days.

(m+8)/m = 60/50

So, m = 40

Question 9

12 men and 18 boys working $7\frac{1}{2}$ hours a day can do a certain work in 60 days. If one man works equal to 2 boys. Then the number of boys required to help 21 men to do twice the work in 50 days, working 9 hours a day, will be

A 30

B 42

C 48

D 90

Answer: B

Explanation:
2 boys = 1 man

So, 21 men can do work W is 60 days working 7.5 hours per day.

to do 2W, 42 men are needed.

To do the job in 50 days, 60 x 42 / 50 men are needed.

To do the job working 9 hours a day, 7.5/9 x 60 x42/50 men are needed

= 42 men

We only have 21 men so, we get 42 extra boys to get the work needed for the 21 extra men.

Question 10

30 men working 5 hours a day can do a task in 16 days. In how many days will 40 men working 6 hours a day do the same task?

A 12 days

B 10 days

C 15 days

D 18 days

Answer: B

Explanation:
Let the required number of days be x.

A/c to question ,

$M_1T_1D_1 = M_2T_2D_2$

$30 \times 5 \times 16 = 40 \times 6 \times x$

x = 10

So, the answer would be option b)10 days

Question 11

Working together, P, Q and R reap a field in 6 days. If P can do it alone in 10 days and Q in 24 days, in how many days will R alone be able to reap the field?

A 32 days

B 40 days

C 45 days

D 60 days

Answer: B

Explanation:
A/c to question ,

$$\frac{1}{P}+\frac{1}{Q}+\frac{1}{R}=\frac{1}{6}$$

$$\frac{1}{10}+\frac{1}{24}+\frac{1}{R}=\frac{1}{6}$$

$$R=\frac{1}{6}-\frac{1}{10}-\frac{1}{24}=\frac{3}{120}$$

$$R=\frac{1}{40}$$

So, the answer would be option b)40 days

Question 12

Working alone, A can do a job in 15 days and B can do the same job in 18 days. In how many days will the job be completed if both work together?

A 10/3 days

B 36/5 days

C 5/36 days

D 15 days

E 90/11 days

Answer: E

Explanation:
A can do (1/15) part of job in 1 day.

and B can do (1/18) part of job in 1 day.

So,in 1 day they together can do

$(1/15)+(1/18)=(6+5)/90=11/90$

part of job.

So, they together can do full job in 90/11 days.

So,E is correct choice.

Question 13

P is twice as efficient as Q. Q takes 12 days to complete a job. If both of them work together, how much time will they take to complete the job?

A 6 days

B 5 days

C 4 days

D 3 days

Answer: C

Explanation:
P is twice efficient than Q.

It means that Q take 2 times of P's time to complete the job.

So, P will take $\binom{12}{2} = 6$ days to complete the job.

So, P can do 1/6 part of the job in 1 day and Q can do 1/12 part of the job in 1 day.

So,they together can do $\left(\frac{1}{6} + \frac{1}{12}\right) = \frac{3}{12} = \frac{1}{4}$ part of job in 1 day.

So, they together will take 4 days to complete the job.

C is correct choice.

Question 14

Manju takes 16 days to complete a work. If she works with her friend Jenny they complete it in 12 days. How many days will it take for Jenny to complete the work alone?

A 48

B 32

C 36

D 24

Answer: A

Explanation:
Manju does full job in 16 days.

In 1 day he will do $1/16$part of job.

Manju and Jenny together does full job in 12 days.

So,they together will do $1/12$ part of job in 1 day.

So, Alone Jenny will do $((1/12) - (1/16))$ or 1/48 part of job in 1 day.

So,Jenny will finish the job in 48 days.

A is correct choice.

Question 15

S can finish 50% of a work in a day. T can do 25% of the work in a day. Both of them together will finish the work in .... days.

A 2.66

B 2.33

C 1.33

D 1.67

Answer: C

Explanation:

"S can finish 50% of a work in a day" means S can complete work in $\frac{1}{2}$ a day

"T can do 25% of the work in a day" means T can complete work in $\frac{1}{4}$ a day

both S and T can Complete the work in = $\frac{1}{2} + \frac{1}{4} = \frac{3}{4}$ a day

So they can complete the whole work in = $\frac{4}{3}$ days