Time and Work

Work: It is defined as something which has an effect or outcome; often the one desired or expected.

Work = Efficiency x Time

Efficiency : It is defined as work done per unit time (day/min/hr/sec). It is inversely proportional to the time taken.

$$Efficiency \ \alpha \ \frac{1}{Time\ Taken}$$

Time = Work / Efficiency

Questions Based on Efficiency

1.A can do a piece of work in 70 days and B is 40% more efficient than A. The number of days taken by B to do the same work is

(1) 40 days (2) 60 days

(3) 50 days (4) 45 days

2. A is 40% more efficient then B, they together completed the whole work in 15 days. In how much time B alone do the work?

(1) 36 days

(2) 28 days

(3) 24 days

(4) 12 days

3. A is 50% more efficient than B, then In how much time they together complete the whole work? If A alone completes the whole work in 25 days.

(1) 70 days

(2) 30 days

(3) 40 days

(4) 15 days

4. A is 200% more efficient than B, While A takes 30 days less than B to complete a work then In how much time (approx) they together complete the whole work?

(1) 6 days

(2) 8 days

(3) 12 days

(4) 16 days

Questions Based On Chain Rule

M1D1H1/W1 = M2D2H2/W2

M- Men or type of worker

D- Day

H- Hour

W- work

5. 39 persons can repair a road in 12 days working 5 hours a day.In how many days will 30 persons working 6 hours a day complete the work ?

(1) 10 days

(2) 13 days

(3) 14 days

(4) 15 days

6. 5 persons can prepare an admission list in 8 days working 7 hours a day. If 2 persons join them so as to complete the work in 4 days, they need to work per day for :

(1) 10 hours

(2) 9 hours

(3) 12 hours

(4) 8 hours

7. 7 men can complete a piece of work in 12 days. How many additional men will be required to complete double the work in 8 days ?

(1) 28

(2) 21

(3) 14

(4) 7

8. There is sufficient food for 400 men for 31 days, after 28 days 280 men leave the place. For how many days will the rest of the food last for rest of the man?

(1) 24

(2) 10

(3) 16

(4) 18

9. There is sufficient food for 1600 men for 120 days and each take 900 gm food everyday, but after 80 days 400 men leave the place and now each one take 1000 gm food everyday. For how many days will the rest of the food last for restof the man?

(1) 32 days

(2) 26 days

(3) 48 days

(4) 19 days

Questions

BASED

ON

WAGES

10. Suman can do a work in 3 days. Sumati can do the same work in 2 days. Both of them finish the work together and get 150.What is the share of Suman ?

(1) 30

(2) 60

(3) 70

(4) 75

11. A and B can do a work in 16 and 24 days respectively, and with the help of C in 6 days. If the total wages for work is Rs 400. Find share of C.

(1) 120

(2) 200

(3) 150

(4) 250

12. A, B and C completed a work costing

1,800. A worked for 6 days, B for 4 days and C for 9 days. If their daily wages are in the ratio

of 5 : 6 : 4, how much amount will be received by A?

(1) 800

(2) 600

(3) 900

(4) 750

13. If 5 men or 7 women can earn 5,250 per day, how much would 7 men and 13 women earn per day ?

(1) 11,600

(2) 11,700

(3) 16,100

(4) 17,100

Questions

BASED

ON

Alternate Time

14.A and B can complete a work in 12 and 15 days respectively. They started the work alternately for 1 day each and A started the work first. In how much time the whole work will be completed?

(1) 13 ¼ days

(2) 11 days

(3) 16 ¼ days

(4) 17days

15. Sita and Gita can complete a work in 8 and 12 hours respectively.If they work in stretches of one hour alternatively, sita beginning at 9 am then at what time the work will be completed?

(1) 5 : 30 pm

(2) 6 : 00 am

(3) 5 : 30 am

(4) 6 : 30 pm

16. A & B working alone can do a work in 9 and 12 days, respectively. If they work for a day alternately, A beginning, in how many days the work will be completed?

A.12

B.12 ¼

C.10

D.10 ¼

Advance Questions

17. A is twice as good a workman as B and B is twice as good a workman as C. If A and B can together finish a piece of work in 4 days, then C can do it by himself in

(1) 6 days

(2) 8 days

(3) 24 days

(4) 12 days

18. A does half as much work as B in one sixth of the time. If together they take 10 days to complete a work, how much time shall B take to do it alone?

(1) 70 days

(2) 30 days

(3) 40 days

(4) 50 days

19. Jyothi can do 3/4 of a job in 12 days. Mala is twice as efficient as Jyothi. In how many days will Mala finish the job ?

(1) 6 days

(2) 8 days

(3) 12 days

(4) 16 days

20. A and B together can do a work in 12 days. B and C together do it in 15 days. If A's efficiency is twice that of C, then the days required for B alone to finish the work is

(1) 60 days

(2) 30 days

(3) 20 days

(4) 15 days

21. Two workers A and B working together completed a job in 5 days.If A worked twice as efficiently as he actually did and B worked 1/3 as efficiently as he actually did, the work would have been completed in 3 days. To complete the job alone, A would require

(1) 5 1/5 days
(2) 6 1/4 days
(3) 7 1/2 days
(4) 8 3/4 days

22. If the work done by (x –1) men in (x + 1) days is to the work done by (x + 2) men in (x – 1) days are in the ratio 9 : 10, then the value of x is equal to :

(1) 5

(2) 6

(3) 7

(4) 8

23. A contractor undertook to finish a work in 92 days and employed 110 men. After 48 days, he found that he had already done3/5 part of the work, the number of men he can withdraw so that the work may still be finished in time is :

(1) 45

(2) 40

(3) 35

(4) 30

24. A man undertakes to do a certain work in 150 days. He employs 200 men. He finds that only a quarter of the work is done in 50 days. The number of additional men that should be appointed so that the whole work will be finished in time is :

(1) 75

(2) 100

(3) 125

(4) 50

25. A man and a boy received 800 as wages for 5 days for the work they did together. The man's efficiency in the work was three times that of the boy. What are the daily wages of the boy ?

(1) 76

(2) 56

(3) 44

(4) 40

26. A daily-wage labourer was engaged for a certain number of days for 5,750; but being absent on some of those days he was paid only 5,000. What was his maximum possible daily wage?

(1) 125

(2) 250

(3) 375

(4) 500

27. A labourer was appointed by a contractor on the condition that he would be paid 75 for each day of his work but would be defined at the rate of 15 per day for his absence, apart from losing his wages, After 20 days, the contractor paid the labourer 1140. The number of days the labourer abstained from work was

(1) 3 (2) 5

(3) 4 (4) 2

28. A, B and C can do a piece of work in 20, 30 and 60 days, respectively. In how many days can A do the work if he is assisted by B and C on every third day?

A.12

B.15

C.16

D.18

29. A work was completed by three persons of equal ability, first one doing m hours for m days, second one doing n hours for n days (m and n being integers) and third one doing 16 hours for 16 days. The work could have been completed in 29 days by third person alone with his respective working hours. If all of them do the work together with their respective working hours, then they can complete it in about

[1] 12 days

[2] 13 days

[3] 14 days

[4] 15 days

30. Three labourers worked together for 30 days, in the course of work, all of them remained absent for few days. One of them was absent for 10 days more than the second labourer and the third labourer did one-third of the total work. How many days more than the third labourer was the first one absent?

[1] 4

[2] 5

[3] 6

[4] cannot be determined

31. Two persons A and B can do a work alone in 29 days. A takes the rest of one day after every 4 days and B takes the rest of one day after every 5 days. If A and B starts working together, then the work will be completed on

[1] 15th day

[2] 16th day

[3] 17th day

[4] 18th day

Thank you