TIME AND WORK

Direction: Read the following questions carefully and choose the right answer.

1. **Sunder and Subhash are chefs in a hotel. In 15 minutes, Sunder can cut 112 onions and Subhash is 125% as efficient as Sunder. One day, in the hotel 4200 onions were to be cut. If Sunder and Subhash started working together, then in how many hours they can complete the work?**

   A. 4 hours 10 minutes B. 4 hours 20 minutes C. 4 hours 50 minutes D. 4 hours 15 minutes E. None of these

2. **A, B and C can do a certain piece of work in 16, 20 and 24 days respectively. They started the work together but after 'x – 8' days, A left the job. 'x' days before completion of the work B also left. If the whole work is completed in 'x+5' days, then find the value of 'x'.**

   A. 12 B. 14 C. 15 D. 18 E. None of these

3. **Four friends A, B, C and D are assigned to complete a work. A, C and D together can complete the task in 8 days while A and C together can complete the same work in 72/7 days. If B is 20% more efficient than D, then find the sum of number of days taken by B and C to complete the task individually, if it is given that ratio of efficiency of A and C is 3: 4, respectively.**

   A. 56 days B. 42 days C. 36 days D. 48 days E. 54 days

4. **It takes 8 women, each working at the same rate a total of 20 days to build a room. If 8 women start to build the room on January 1, 2006 and one man per day is added beginning from January 7, 2006, at the end of which day will the room be completed given that each man can work twice as fast as each woman?**

   A. January 12, 2006 B. January 13, 2006 C. January 14, 2006 D. January 16, 2006 E. January 15, 2006

5. **A and B together can do a work in 18 days and B and C together can do it in 30 days. All three arrive on the work site and for the first 14 days only B and C work together, then A worked alone for some days and then he left for his home. After A has left B and C complete the remaining work in 18 days with B working on every 1st and 3rd day and C working on every 2nd day. After how many days A left the work site?**

   A.18 days B. 20 days C. 6 days D. 12 days E. None of these

6. **Rocky and Monty decided to do a task. They can do the task in z and (z + 10) days respectively. They were paid Rs. 2000 for completing the task in 16 2/3 days. They took help of Jolly and completed the work in time. If Jolly's share is Rs. 500, find the time taken by Rocky and Monty to complete the task individually?**

   A. 20, 30 days B. 30, 40 days C. 40, 50 days D. 45, 55 days E. None of these

7. **In a restaurant, the owner plan to do a work in 8 days with 4 machines. But after 2 days, they find that only 40% of the work is done with the machines running for 6 hours a day. If they want to complete the work in the planned time with the machines, how many hours per day the machines have to work?**

A. 4 hours B. 5 hours C. 6 hours D. 3 hours E. 7 hours

8. **A farmer can sow 80 seeds in an hour. He had 1000 seeds to be sown in 2 days time working 5 hours daily. To accomplish this work he took the help of his wife and both of them started working together to complete the work. Find out how many seeds can be sown by his wife in an hour?**

A. 30 B.25 C. 24 D. 28 E. 20

9. **Amit, Bhola and Chandan can do some specific part (and not whole) of work in 6 days, 9 days and 12 days respectively. If they work together for 24 days to complete some additional piece of work, how many days will Bhola and Chandan together take to complete this additional piece of work done by all three of them in 24 days?**

A. 44 days B. $31\frac{2}{9}$ days C. 50 days D. $44\frac{4}{7}$ days E. 42 days

10. **24 men get a target of completing a work in 35 days. They started working together and found that after 20 days they just completed 50% of the work. How many more men need to be included so that work finishes in time?**

A. 8 B. 10 C. 12 D. 11 E. 15

11. **Pankaj can do as much work in 4 days as Kamal can do in 6 days, and Kamal can do as much work in 5 days as Ambuj in 8 days. What wages does Ambuj get for a piece of work which Pankaj can do in 70 days, if Ambuj gets Re. 1 for 1 day?**

A. Rs. 144 B. Rs. 124 C. Rs. 168 D. Rs. 130 E. None of these

12. **2 employees and 3 trainees together can finish a project in 7 days, 6 employees and 13 trainees together can finish the same project in 2 days. Find the time taken by 4 employees and 4 trainees together to finish the same work.**

A. 4 days B. 5 days C. 6 days D. 8 days E. None of these

13. **A work is started by a man and it is assumed that he will finish the work in 11 days if working alone. Each subsequent day a new man joined the work. In how many days the four times the original work will be completed, if after the 8th day from the starting of the work no new man will be further added?**

A. 11 B. 10 C. 9 D. 8 E. None of these

14. 20 men, 12 women and 18 boys were given a project of doing 3960 designs of a building in 5 days. The ratio of the number of designs made by them respectively in 1 day is 3 : 2 : 1. If on the 1st day all of them worked, on the 2nd day 4 women and 6 boys went absent and on the 3rd day, 6 men and 10 boys went absent but still the work got finished on the 3rd day. Then find the number of designs designed by them on the 3rd day?

A. 1021 B. 1110 C. 1621 D. 1210 E. None of these

15. The work done by a women worker in 10 hours is equal to the work done by men worker in 8 hours and by a girl worker in 12 hours. If working 12 hours per day 10 men worker can finish a work in 16 days. In how many days 32 men worker, 32 women worker and 32 girl's worker together finish the same work working 8 hours per day?

A. 2 $\frac{1}{71}$ days B. 2 $\frac{2}{65}$ days C. 3 $\frac{3}{74}$ days D. 2 $\frac{2}{69}$ days E. None of these

16. 4 Men can complete a piece of work in 58 days. They started the work together but at the end of every 5th day one man leaves the work and in the place of the man, one woman joins the work and the women continue doing the work and finish it despite all the men left in the mid of the work. Find the total number of days they take to complete the work in this manner if the efficiency of one women is 25% of the efficiency of one man.

A. 174.5 days B. 194.5 days C. 116 days D. 174 days E. None of these

17. 3 workers Peroola, Rahul and Prashant can complete a piece of work in 6 days. Peroola takes 15 days less than Rahul to complete the same work. Find in how many days will Prashant complete the whole work alone with 75% of his original efficiency, if Rahul can complete the work alone in 35 days?

A. $\frac{560}{37}$ days B. $\frac{499}{36}$ days C. $\frac{361}{17}$ days D. $\frac{555}{43}$ days E. None of these

18. Three persons A , B, and C complete a piece of work in 6 days for which they are paid a sum of Rs. 480.If the efficiency of A, B and C are in ratio 4 : 5 :7, then find the daily income of B?

A. Rs. 25 B. Rs. 30 C. Rs. 150 D. Rs. 20 E. None of these

19. Rashmi and Pallavi can make a carpet in 3 days and 12 days more than the time taken if both of them worked together. Find the time in which Rashmi can make the carpet alone.

A. 9 days B. 6 days C. 12 days D. 8 days E. None of these

20. Three workers Trump, Putin and Jinping are appointed to do a job. They together started the job but Jinping left after 3 days when 37% of the job was done. The remaining job was completed by Trump and Putin in 7 days. The ratio of efficiency of Trump and Putin is 4 : 5. Find the number of days required by the slowest worker to complete the entire job alone?

A. 22 days B. 20 days C. 24 days D. 18 days E. 30 days

21. A group of men decided to do a job in 4 days, but 20 men dropped out everyday. Find the number of men who initially decided to do the job, if job was completed in 7 days?

A. 70 B. 110 C. 140 D. 120 E. None of these

22. Two male workers A and B can complete a piece of work in 20 and 35 hours respectively. A female worker, C can complete the whole work alone in H hours with three - fourth of her original efficiency. If all the three working together with their usual efficiency can complete the whole work in 6 hours, then find the value of H.

A. $\frac{460}{37}$ days B. $\frac{560}{27}$ days C. $\frac{460}{17}$ days D. $\frac{560}{37}$ days E. None of these

23. Raj can do a piece of work in 20 days and Rohan can do it in 12 days. On which date will they complete the work, if they work together on prime number dates starting on 29th April?

A. 7th May B. 17th May C. 13th May D. 23rd May E. None of these

24. To do a certain task Bhuvan would take 3 times as long as Abir and Varun together; and Varun would takes 4 times as long as Abir and Bhuvan together. Three of them together can complete the task in 5 days. How much time is taken by Bhuvan and varun to complete the task?

A. $14\frac{1}{2}$ days B. $13\frac{1}{3}$ days C. 12 days D. $11\frac{1}{9}$ days E. $10\frac{1}{3}$ days

25. If 5 men and 5 women work together then they can finish a work in 5 days but if 5 women work alone then they take 40/3 more days than the time required by 5 men. Find efficiency of one woman is how much percentage less than one man?

A. 60% B. 66.66% C. 40% D. 62.5% E. None of these

26. A can do 3/5th of work in 15 days. Efficiency of B is 25% more than that of A. Both A and B started working together and left the work after five days. C completed the remaining work in 11 days. Efficiency of C is what percent more/less than that of A ?

A. 20% less B. 25% more C. 20% more D. 25% less E. 33.33% more

27. Ramesh and Suresh can complete a piece of work in 25 and 40 days respectively. They started working alternatively starting with Ramesh. After working for few days, Ganesh has also joined with condition that Ganesh will work only when Ramesh is working. But Suresh left the work three days before the completion of work. If it is

known that efficiency of Ganesh is half to that of Ramesh, then after how many days Ganesh has joined the work? (Given that the ratio of work done by Ramesh, Suresh and Ganesh are in ratio of 6 : 3 : 1)

A. 10 days B. 12 days C. 20 days D. 15 days E. 25 days

28. N number of workers with same efficiency started working on one project. On Second day, N more number of workers with same efficiency joined them. On third day N more number of workers joined them. After working for four days, numbers of workers started decreasing by N from next day. It took 7 days to complete the work. How much time will it take, if 4N workers worked continuously on that project ?

A. 3 days B. 2 days C. 8 days D. 4 days E. Can't be determined

29. 'A' alone can do half of a work in 35 days. The time taken by B to do one third of the work is equal to the time taken by A to do one fourth of the work. Find the number of days A and B together will take to complete the work?

A. 35 days B. 40 days C. 30 days D. 60 days E. None of these

30. A and B together can complete a piece of work in 30 days but C can destroy the work in 120 days. If B and C work together, then they take 240 days to complete the work. Find the number of days, A alone will take to complete the work?

A. 36 days B. 42 days C. 60 days D. 48 days E. None of these

31. Ram takes 10 hours more to complete a piece of work than that of Ramya. If they work together then by what percentage should Ramya decrease her efficiency so both of them complete the work in 20 hours and both of them had completed the piece of work in equal proportion?

A. 20% B. 25% C. 40% D. 50% E. Can't be determined

32. A and B together can complete a piece of work in 12 days but B and C together can complete the same piece of work in 40/3 days. A started the work and worked only for 5 days then C alone complete the remaining work in 100/3 days. Had A worked for 12 days then C would have taken only 24 days to complete the remaining work. The number of days taken by C alone to complete the whole work is how many more than that by B alone to complete the whole work?

A. 30 days B. 10 days C. 25 days D. 15 days E. None of these

33. The number of days taken by 16 men to complete a piece of work is 2 days less than that by 18 women to complete the same work. If the efficiency of one woman is 20% less than that of one man, then in how many days all 16 men and 18 women together can complete the same work?

A. $9\frac{9}{19}$ days B. $9\frac{4}{17}$ days C. $8\frac{1}{17}$ days D. $9\frac{12}{19}$ days E. None of these

34. B takes 4 times as long as A and C together and C takes thrice as long as A and B together to complete the work. If A, B and C together complete the work in 20 days, how long would B alone take to complete the work?

A. 110 days B. 80 days C. 100 days D. 90 days E. None of these

35. 24 men started the working on project and complete 40% of the work in 10 days working 8 hours a day. 24 women also joined the project after 15 days from the start of the project. Find the total number of days taken to complete the whole work if efficiency of women is half to that of men and women also worked 8 hours a day.

A. 21 days B. $\frac{70}{3}$days C. $\frac{65}{3}$ days D. 23 days E. None of these

36. A, B and C can do a certain piece of work in 32, 24 and 28 days respectively. They started working together but after 'x' days A left the job and 'x + 1' days before completion of the work B also left. Find the value of $x^2 - 2x + 20$ if the whole work is completed in 4x – 2 days.

A. 23 B. 28 C. 35 D. 44 E. None of these

37. A and B can complete a work in 18 days and B and C can complete the same work in 30 days. If B alone can complete 1/3rd of the work in 30 days, in how many days A and C can complete the work?

A. 40 days B. 30 days C. 45 days D. 25 days E. None of these

38. Three persons A, B and C can complete 11.11%, 5% and 6.66% of a work in one day. In how many days the work will be completed if all three work together?

A. $4\frac{14}{39}$ days B. $4\frac{11}{39}$ days C. $4\frac{16}{41}$ days D. $4\frac{13}{41}$ days E. None of these

39. A and C can build a wall in 9 days and 8 days respectively, while B can destroy the whole wall in 10 days. If A works with C on first day, what is the number of days required to build the wall if A is joined by B and C on alternate days?

A. $8\frac{11}{85}$ days B. $8\frac{4}{85}$ days C. $8\frac{4}{89}$ days D. $8\frac{13}{89}$ days E. None of these

40. For a particular work the efficiency of A is 66.67% more than that of B. If both of them working together can complete 88.88% of work in 10 days, in how many days B alone can complete the work?

A. 40 B. 25 C. 30 D. 35 E. None of these

41. A, B and C can paint a wall in 10 hrs, 8 hrs and 20 hrs respectively. A and B start painting the left half of the wall and C starts painting only right half of the wall. After 2 hrs only A paints left half of the wall while B and C start painting right half of the wall and thus they complete the work painting only their side of the wall. What is the time difference between the completion of the left and right half of the wall?

A. $1\frac{2}{7}$ hrs B. $1\frac{9}{14}$ hrs C. $1\frac{11}{14}$ hrs D. $1\frac{13}{14}$ hrs E. None of these

42. The ratio of the number of hours taken by pipes A, B, C and D to empty a container while working individually is 4 : 6 : 5 : 8. Sum of the number of hours taken by them is 230 hours while working individually. If B and C work for the 1st 5 hours and A and D work for the next 5 hours, again B and C work for the next 5 hours and they continue working in this pattern then how much portion would be emptied in the 1st 11 hours given that the container is full initially?

A. $\frac{12}{81}$ B. $\frac{761}{907}$ C. $\frac{12}{17}$ D. $\frac{163}{400}$ E. None of these

43. A and B alone can complete a work in 24 and 48 days, respectively. 50% of the work is completed by C in 3x days and remaining work is completed by A and B working together in 'x' days, find the time taken by B and C to complete the work while working together.

A. 16 days B. 24 days C. 20 days D. 18 days E. 32 days

44. Daily wage of A is 4/5 of the daily wage of B, and daily wage of C is 3/2 of the daily wage of A. If the average daily wage of A, B and C is taken together is Rs. 3000, then which of the following is the daily wages of each of them?

A. Rs. 2200, Rs. 2800, Rs. 4000 B. Rs. 2400, Rs. 3000, Rs. 3600 C. Rs. 2880, Rs. 3600, Rs. 4200
D. Rs. 1200, Rs. 1800, Rs. 6000 E. None of these

45. A can complete a piece of work in 12 days, A, B and C can complete the work in 6 days. Efficiency of B is 0.5 times the efficiency of A. In how many days C can complete the work alone?

A. 10 days B. 16 days C. 24 days D. 12 days E. None of these

46. A and B together can complete a piece of work in 12 days, B and C together can complete a piece of work in 16 days, A and C together can complete a piece of work in 24 days. Find the number of days in which A, B and C together can complete the work.

A. $\frac{31}{5}$ B. $\frac{32}{3}$ C. $\frac{32}{5}$ D. $\frac{31}{3}$ E. None of these

47. A can complete a piece of work in 24 days and B can complete the work in 36 days. Efficiency of C is twice the efficiency of A and B together. Find the number of days in which C can complete the work alone.

A. $4\frac{1}{5}$ days B. $7\frac{1}{5}$ days C. $5\frac{1}{5}$ days D. $6\frac{1}{5}$ days E. None of these

48. A can complete a piece of work in 36 days. Efficiencies of B and C are 1.5 times and 2 times respectively the efficiency of A. Find the number of days taken by all of them to complete the work.

A. 15 days B. 9 days C. 12 days D. 8 days E. None of these

49. P can complete a piece of work in 12 days, Q can complete the same work in 15 days and R can complete the work in 20 days. Doing that work together, they get an amount of Rs.84000. Find the sum of shares of P and Q.

A. Rs. 56000 B. Rs. 63000 C. Rs. 42000 D. Rs. 49000 E. None of these

50. 10 men can do a piece of work in 18 days and 15 women can do the same work in 24 days. If the work is started by 5 men and 6 women and they work for 10 days after that all the remaining work is done by 5 men. How many days in total are required to complete the work?

A. 30 days B. 20 days C. 26 days D. 13 days E. None of these

ANSWERS

1	A	**11**	C	**21**	C	**31**	B	**41**	C
2	E	**12**	A	**22**	D	**32**	E	**42**	D
3	D	**13**	C	**23**	B	**33**	A	**43**	B
4	B	**14**	B	**24**	D	**34**	C	**44**	B
5	B	**15**	C	**25**	B	**35**	C	**45**	C
6	C	**16**	B	**26**	B	**36**	B	**46**	B
7	D	**17**	A	**27**	C	**37**	E	**47**	B
8	E	**18**	A	**28**	D	**38**	C	**48**	D
9	D	**19**	A	**29**	C	**39**	B	**49**	B
10	A	**20**	E	**30**	D	**40**	C	**50**	A