Time and Work

Model 1: Basic

1. 15 men can type 3240 pages in 6 days working 2 hours per day. How many men would be required to type 5400 pages working 4 hours per day for 3 days?

   1) 10 2) 16 3) 12 4) 25 5) None of these

2. If 5 workers collect 60 kg wheat in 3 days, how many kilogram of wheat will 8 workers collect in 5 days?

   1) 80 kg 2) 100 kg 3) 120 kg 4) 160 kg 5) None of these

3. 50 people consume 350 kg of rice in 30 days. In how many days will 35 people consume 50 kg of rice?

   1) 2 days 2) 3days 3) 56 days 4) 7 days 5) None of these

4. 4 men work 12 hours daily to complete a work in 9 days. If 16 men work 2 hours a day, in how many days will the work be completed?

   1) 4.5 days 2) 18 days 3) 13.5 days 4) 27 days 5) None of these

5. 15 labours complete a work in 10 days working 6 hours per day, If 18 labours are employed on that work and the work is to be completed in 5 days, then how many hours per day should the work be continued?

   1) 8 2)10 3) 12 4) 9 5) None of these

6. 18 children can do a piece of work in 12 days. How many children would be required to do the same work in 8 days?

   1) 12 2) 18 3) 24 4) 27 5) None of these

7. If 18 men can do a certain job in 36 days, then in how many days can 9 men do the same job?

   1) 36 2) 72 3) 48 4) 90 5) None of these

8. If 15 boys can finish a piece of work in 12 days of 8 hours a day, then how long will it take for 16 boys to do a piece of work 4/6 as great, working 9 hours a day?

   1) 3.33 days 2) 6.66 days 3) 10 days 4)15 days 5) None of these

9. 30 men can do a piece of work in 6 days. How many men would be required to do twice that work in 20 days?

   1) 5 2) 6 3) 18 4) 9 5) None of these

Model 2: Time to finish the given Work

10. A, B and C can finish a piece of work in 10, 15 and 30 days respectively. How many days will be required if A, B and C work together to finish the given work?

    1) 5 2) 6 3) 7 4) 8 5) None of these

11. Govind alone can complete a work in 20 days. Jagdish alone completes it in 30 days. How many days will be required if both of them work together?

    1) 12 days 2) 24 days 3) 25 days 4)10 days 5) None of these

12. Gopal can complete a work in 8 hours and Jai can complete it in 5 hours. How much time will be required if both of them work together?

    1) 6.5 hours 2) 2 1/13 hours 3) 3 1/13 hours
    4) 4 1/13 hours 5) None of these

13. A, B and C can finish a piece of work in 8, 12 and 24 days respectively. In how many days can they finish the work if all of them work together?

    1) 10 days 2) 8 days 3) 6 days 4) 4 days 5) None of these

14. B and C together can complete a work in 8 days, A and B together can complete the same work in 12 days, and A and C together can complete the same work in 16 days. In how many days can A, B and C together complete the work?

    1) $3\frac{9}{13}$ 2) $7\frac{5}{13}$ 3) $7\frac{\mathbf{5}}{\mathbf{12}}$ 4) $3\frac{\mathbf{5}}{\mathbf{12}}$ 5) None of these

15. Father and Son can together finish a work in 3 days. Father alone can finish it in 5 days. How many days will the Son alone take to finish the work?

    1) 5 days 2) 7.5 days 3) 9 days 4)10 days 5)None of these

16. 12 men can complete a work in 6 days. 8 women can do it in 12 days. If 6 men and 8 women are employed together, how many days will be required to finish the work?

    1) 8 days 2) 6 days 3) 12 days 4) 9 days 5) None of these

17. 10 men can complete a piece of work in 15 days and 15 women can complete the same work in 12 days. If all the 10 men and 15 women work together, in how many days will the work get completed?

    1) 6 2) 6.33 3) 6.66 4) 7.66 5) None of these

18. 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?

    1) 3 2) 5 3) 7

    4) Cannot be determined 5) None of these

19. 3 men or 7 women can do a piece of work in 32 days. Find the number of days required by 5 men and 7 women to do a piece of work twice as large.

    1) 29 days 2) 31 days 3) 24 days 4) 19 days 5) None of these

Model 3: Work = Men X Days

20. A work is started by 15 people. After 5 days, 5 more people accompanied them to finish the work in next 10 days. How many people should have started the work to finish it in 11 days?

    1) 24 2) 22 3) 20 4) 25 5) None of these

21. A garrison of 1500 men is provisioned for 60 days. After 25 days, the garrison is reinforced by 500 men. How long will the remaining provisions last?

    1) 24 days 2) 21.75 days 3) 26.25 days 4) 52 days 5) None of these

22. 24 men can complete a work in 16 days. The same work can be completed by 8 women in 72 days, whereas 24 children take 32 days to complete it. If 10 men, 15 women, and 24 children work together, in how many days can the work be completed?

    1) 18 2) 8 3) 22 4) 12 5) None of these

23. 12 men and 18 women can complete a work in 6 days whereas 12 women can complete the work in 18 days. 4 days after they started the work 4 men left, how many days will the remaining people take to complete the remaining work?

    1) 2.4 2) 4 3) 3 4) 5 5) None of these

24. 8 men and 4 women can complete a piece of work in 6 days. The work done by a man in one day is double the work done by a woman in one day. If 8 men and 4 women started working and after 2 days 4 men left and 4 new women joined, in how many more days will the work will be completed?

    1) 5 days 2) 8 days 3) 6 days 4) 4 days 5) 9 days

25. A father can finish a work in 8 days. After working for 3 days, his son joined him and the remaining work got finished in next 1 day. If son works alone, how many days does he take to finish the work?

    1) 8 2) 2 3) 4 4) 32 5) None of these

26. A can do a piece of work in 24 days and B in 30 days. A worked for 6 days and then B also joined him. In how many days will the whole work be completed?

    1) 12 days 2) 14 days 3) 15 days 4) 16 days 5) None of these

27. X and Y can do a piece of work in 20 days and 12 days respectively. X started the work alone and then after 4 days Y joined him till the completion of the work. How long did the work last?

    1) 6 days 2) 10 days 3) 15 days 4) 20 days 5) None of these

28. A and B can do a piece of work in 45 days and 40 days respectively. They began to do the work together but A leaves after some days and then B completed the remaining work in 23 days. After how many days did A leave the work?

    1) 6 2) 8 3) 9 4) 12 5) None of these

29. 5 men and 6 boys finish a piece of work in 4 days; 4 men and 3 boys in 6 days. In how many days would 3 men and 6 boys finish the same work?

    1) 5 days 2) 36/7 days 3) 4 days 4) 29/7 days 5) None of these

30. Sejal alone can complete a task in 12 days. She works alone for 4 days. She completes the remaining work in 4 days with the help of her colleague. How many days will the colleague alone take to complete the task?

    1) 9 2) 12 3) 10

    4) Cannot be determined 5) None of these

Model 4: Change in Workforce/Capacity

31. 6 typists can do a piece of work in 8 hours. If 3 more typists whose working speed is double the earlier typists join together, then the work will be finished in how many hours?

    1) 6 hours 2) 5 hours 3) 4 hours

    4) Data inadequate 5) None of these

32. 8 workers can do a work in 12 days. Two more workers whose efficiency is double than the earlier ones join them, in how many days they will be able to finish that work?

    1) 6 2) 8 3) 10

    4) Cannot be determined 5) None of these

33. Work done by A in one day is half of the work done by B in one day. Work done by B is half of the work done by C, in one day. If C alone can complete the work in 7 days, in how many days can A, B and C together complete the same work?

    1) 28 2) 14 3) 4 4) 21 5) None of these

34. A alone can complete a piece of work in 8 days. Work done by B alone in one day is half of the work done by A alone in one day. In how many days can the work be completed if A and B work together?

    1) 6.33 2) 5.66 3) 5.33 4) 6.66 5) None of these

35. A, B and C together can do a piece of work in 10 days; B and C together work thrice as much as A and A and B together work 4 times as much as C. In how many days can each do it alone?

    1) 45, 22, 52 2) 40, 18, 50 3) 40, 200/11, 50

    4) 30, 200/11, 5 5) None of these

Model 5: Persons Working on Alternate Days

36. X alone can complete a piece of work in 12 days and Y alone can complete the same work in 24 days. If they work on alternate days with X working on the first day, then in how many days will the work be completed?

    1) 15 2) 16 3) 4 4) 8 5) None of these

37. A alone can complete a piece of work in 8 days and B alone can complete the same work in 16 days. If they work on alternate days with A working on the first day, then in how many days will the work be completed?

    1) 5.5 2) 10 3) 10.5 4) 11 5) None of these

Model 6: Distribution of Wages

38. A can do a piece of work in 15 days and B in 20 days. They finished the work with the assistance of C in 5 days and got ₹ 45 as their wages. What is the share of each person?

    1) ₹ 22.5, ₹ 12, ₹ 10.5 2) ₹ 10.5, ₹ 12, ₹ 22.5 3) ₹ 15, ₹ 11.25, ₹ 18.75

    4) ₹ 12.5, ₹ 13, ₹ 19.5 5) None of these

39. A, B and C can do a piece of work in 6, 12 and 30 days respectively. They agreed to work together and finish the work for an amount of ₹ 3400. What will be the share of the person B from the given amount?

    1) ₹ 1500 2) ₹ 1000 3) ₹ 2000 4) ₹ 400 5) None of these

Model 7: Pipes and Cisterns

40. Pipes A and B can fill a cistern in 10 and 12 hours respectively and pipe C can empty it in 6 hours. If all the three are opened simultaneously, then how much time is required for the tank to be full?

    1) 20 hours 2) 60 hours 3) 80 hours 4) 40 hours 5) None of these

41. A cistern can be filled by two taps in 20 min and 30 min respectively and can be emptied by a third tap in 48 min. If they are all turned on at once, when will the cistern be half full?

    1) 16 min 2) 8 min 3) 10 min 4) 12 min 5) None of these

42. A water tub can be filled by two taps in 8 min. One tap is closed after 3 min; the other tap fills the remaining tub in 15 min. How much time will the faster tap take to fill the tub?

    1) 10 min 2) 11 min 3) 12 min 4) 15 min 5) None of these

43. Three pipes A, B and C can fill a cistern in 15, 20 and 30 min respectively. They were all turned on at the same time but after 5 min the first two pipes were turned off. In what time will the cistern be full?

    1) 7.5 min 2) 5 min 3) 13 min 4) 12.5 min 5) None of these

44. Two pipes A and B together can fill a cistern in 4 hours. Had they been opened separately, then B would have taken 6 hours more than A to fill the cistern. How much time will be taken by A to fill the cistern separately?

    1) 1hr 2) 2 hrs 3) 6 hrs 4) 8 hrs 5) None of these

Answers

1 - 4	2 - 4	3 - 5	4 - 3	5 - 2	6 - 4	7 - 2	8 - 2	9 - 3	10 - 1
11 - 1	12 - 3	13 - 4	14 - 2	15 - 2	16 - 2	17 - 3	18 - 3	19 - 3	20 - 4
21 - 3	22 - 4	23 - 1	24 - 1	25 - 2	26 - 4	27 - 2	28 - 3	29 - 2	30 - 2
31 - 3	32 - 2	33 - 3	34 - 3	35 - 3	36 - 2	37 - 3	38 - 3	39 - 2	40 - 2
41 - 2	42 - 3	43 - 4	44 - 3						

Additional Examples (English Only)

1. A contractor undertook to finish a certain work in 124 days and employed 120 men. After 64 days, he found that he had already done $\frac{2}{3}$ of the work. How many men can be discharged now, so that the work may finish in time?

   a) 40 b) 50 c) 48 d) 56

2. A and B can separately do a piece of work in 20 days and 15 days respectively. They worked together for 6 days after, which B was replaced by C. The work as finished in next 4 days. The number of days in which C alone could do the work is

   a) 30 days b) 45 days c) 40 days d) 35 days

3. A and B together can do a piece of work in 12 days which B and C together can do in 16 days. After A has been working at it for 5 days and B for 7 days, C finishes it in 13 days. In how many days B could finish the work?

   a) 48 days b) 24 days c) 16 days d) 12 days

4. A is thrice as good a workman as B and is, therefore, able to finish a piece of work in 60 days less than B. the time (in days) in which they can do it working together is

   a) 22 b) $22\frac{1}{2}$ c) 23 d) $23\frac{1}{4}$

5. A does 20% less work than B. If A can complete a piece of work in $7\frac{1}{2}$ hours, then B can do it in

   a) 10 hours b) 4 hours c) 6 hours d) 8 hours

6. A & B can do a job in 12 days, B & C in 15 days and C & A in 20 days. How long would a take to do that work?

   a) 20 days b) 60 days c) 30 days d) 40 days

7. A and B working separately can do a piece of work in 9 and 12 days respectively. If they work for a day alternately with A beginning, the work would be completed in

   a) $10\frac{2}{3}$ days b) $10\frac{1}{2}$ days c) $10\frac{1}{4}$ days d) $10\frac{1}{3}$ days

8. A is 50% as efficient as B. C does half of the work done by A and B together. If C alone does the work in 20 days, then A, B and C together can do the work in

   a) $5\frac{2}{3}$ b) $6\frac{2}{3}$ c) 6 days d) 7 days

9. If 8 men or 12 boys can do a piece of work in 16 days, the number of days required to complete the work by 20 men and 6 boys is

   a) $5\frac{1}{3}$ b) $6\frac{1}{3}$ c) $8\frac{1}{3}$ d) $7\frac{1}{3}$

10. A can finish a work in 18 days and B can do the same work in 15 days. B worked for 10 days and left the job. In how many days, A alone can finish the remaining work?

    a) 6 b) $5\frac{1}{2}$ c) 5 d) 8

11. If 10 men or 20 women or 40 children can do a piece of work in 7 months, then 5 men, 5 women and 5 children together can do half of the work in

    a) 6 months b) 4 months c) 5 months d) 8 months

12. 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

    a) 75 b) 100 c) 125 d) 50

13. Two men started a job in which A was thrice as good as B and therefore took 60 days less than B to finish the job. How many days will they take to finish the job, if they start working together?

    a) 15 days b) 20 days c) $22\frac{1}{2}$ days d) 25 days

14. A and B together can complete a work in 3 days. They start together. But, after 2 days, B left the work. If the work is completed after 2 more days, B alone could do the work in

    a) 10 days b) 4 days c) 6 days d) 8 days

15. A piece of work can be done by Ram and Shyam in 12 days, by Shyam and Hari in 15 days and by Hari and Ram in 20 days. Ram alone will complete the work in –

    a) 30 days b) 32 days c) 36 days d) 42 days

16. 3 men or 5 women can do a work in 12 days. How long will 6 men and 5 women take to finish the work?

    a) 4 days b) 5 days c) 6 days d) 7 days

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

    a) 30 days b) 35 days c) 40 days d) 454 days

18. A can do a work in 12 days. When he had worked for 3 days, B joined Him. If they complete the work in 3 more days, in how many days can B alone finish the work?

    a) 6 days b) 12 days c) 4 days d) 8 days

19. X is 3 times as fast as Y and is able to complete the work in 40 days less than Y. Then the time in which they can complete the work together is

    a) 15 days b) 10 days c) $7\frac{1}{2}$ days d) 5 days

20. 'x' number of men can finish a piece of work in 30 days. If there were 6 men more, the work could be finished in 10 days less. The original number of men is

    a) 6 b) 10 c) 12 d) 15

21. A work can be completed by P and Q in 12 days, Q and R in 15 days, R and P in 20 days. In how many days P alone can finish the work?

    a) 10 b) 20 c) 30 d) 60

22. 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

    a) 60 b) 30 c) 20 d) 15

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

    a) ₹ 11,600 b) ₹ 11,700 c) ₹ 16,100 d) ₹ 17,100

24. If A and B together can complete a piece of work in 15 days and B alone in 20 days, in how many days can A alone complete the work?

    a) 60 b) 45 c) 40 d) 30

25. A can complete a piece of work in 18 days, B in 20 days and C in 30 days. B and C together start the work and are faced to leave after 2 days. The time taken by A alone to complete the remaining work is

    a) 10 days b) 12 days c) 15 days d) 16 days

26. 1 man, 3 women and 4 boys can do a piece of work in 96h, 2 men and 8 boys can do it in 80h , 2 men and 3 women can do it in 120 h, 5 men and 12 boys can do it in

    a) 39 $\frac{1}{11}$h b) 42 $\frac{7}{11}$h c) 43 $\frac{7}{11}$h d) 44h

27. Two pipes P and Q can fill a cistern in 12 min and 15min respectively. If both are opened together and at the end of 3 min, the first is closed. How much longer will the cistern take to fill?

    a) $8\frac{1}{4}$ m b) $8\frac{3}{4}$ min c) 5 min d) $8\frac{1}{2}$ min

28. Ronald and Elan are working on an assignment. Ronald takes 6h to type 32 pages on a computer, while Elan takes 5 h to type 40 pages. How much time will they take, working together on two different computers to type an assignment of 110 pages?

    a) 7 h 30 min b) 8 h c) 8 h 15 min d) 8 h 25 min

Answers

1 – d	2 - c	3 - a	4 - b	5 - c	6 - c	7 - c	8 - b	9 - a	10 - a
11 - b	12 - b	13 - c	14 - c	15 - a	16 - a	17 - a	18 - a	19 - a	20 - c
21 - c	22 - c	23 - d	24 – a	25 - c	26 - c	27 - a	28 - c		