QUANTITATIVE ABILITY - TIME AND WORK (BASIC)

Directions for questions 1 to 5:

3 toys maker Mahesh, Suresh and Ramesh take a contract of making toys. Mahesh alone can make the entire toys in 12 days while Suresh alone can make the entire toys in 15 days and Ramesh can destroy the entire toys in 20 days.

Q 1: How much time will Mahesh and Suresh take to make all toys if Mahesh and Suresh work together?

(a) 20/3 days (b) 13.5 days (c) $13\frac{1}{4}$ days (d) 8.25 days

Q 2: How much time will they take to make the entire toys if all 3 work together?

(a) 3 days (b) 13.5 days (c) $13\frac{1}{4}$ days (d) 10 days

Q 3: How much time will Mahesh and Suresh take to make the entire toys and if they work on alternate days with Mahesh starting on the first day?

(a) 13 days (b) 13.5 days (c) $13\frac{1}{4}$ days (d) 8.25 days

Q 4: In the previous question, when will the work be complete if all 3 work on alternate days, with Mahesh working on first day, Suresh on second day, Ramesh on third day, and this process repeats till work is complete?

(a) 30 days (b) $30\frac{3}{5}$ days (c) $28\frac{1}{4}$ days (d) Never

Q 5: How much time Mahesh and Suresh will they take to make the entire toys if they start working together, but Suresh leaves 2 days before the scheduled completion of the work?

(a) 6.9 days (b) $8\frac{1}{5}$ days (c) 8.5 days (d) $8\frac{4}{15}$ days

Q 6: Two taps can fill a tank in 24 min and 36 min respectively. A 3rd outlet pipe can empty the tank in 30min. If all of them are opened simultaneously, what will be the time required to fill the tank?

(a) 75 min (b) 20 min (c) 12 min (d) $\frac{360}{13}$ min

Q 7: Bhim and Arjun working by themselves can build a wall respectively in 8 days and 18 days more than what they would take when working together. In how many days can Bhim alone build the wall?

(a) 20 (b) 24 (c) 30 (d) 12

Q 8: Three taps are connected to a water tank. First and second taps fill it up in A seconds and B seconds respectively, when they are opened separately. The third tap empties the full tank in C seconds. If all are opened simultaneously, what is the condition required on A, B and C to ensure that the tank will actually fill up?

(a) A + B > C (b) A – B < C (c) AB<BC + CA (d) $A + B > \frac{C}{2}$

Q 9: A tank can be filled by one tap in 10 minutes and by another in 30 minutes. Both the taps are kept open for 5 minutes and then the first one is shut off. In how many minutes more is the tank completely filled?

(a) 5 (b) 7.5 (c) 10 (d) 12

Q 10: A factory has 3 stamping machines for stamping, which can finish a lot in 4, 5 and 6 hours respectively. Due to some power problems in the city on Thursdays, only 2 of these machines can work simultaneously at any given point in time. What is the largest part of the job that can be finished in one hour on a Thursday?

(a) 20/9 (b) 11/15 (c) 9/20 (d) 5/6

Q 11: A can do (1/3) of a work in 5 days and B can do (2/5) of the work in 10 days. In how many days both A and B together can do the work?

(a) $7\frac{3}{4}$ (b) $8\frac{4}{5}$ (c) $9\frac{3}{8}$ (d) 10

Q 12: in 5 days, 64 pumps can fill a 100 liters tank working 12 hours a day. In how many days will 80 pumps, working 8 hours a day, fill another tank of capacity 300 liters?

(a) 36 days (b) 27 days (c) 18 days (d) 13.5 days

Q 13: 7 wrestlers fight for 8 hours and lose a total of 20 pounds, how many more wrestlers fighting would it take to lose a total of 20 pounds in only 4 hours, if the new wrestlers lost weight only half as fast as the original 7?

(a) 7 (b) 21 (c) 27 (d) 14

Q 14: 15 men take 21 days of 8 hours each to do a piece of work. How many days of 6 hours each would 21 women take if 3 women do as much work as 2 men?

(a) 20 (b) 21 (c) 25 (d) 30

Q 15: 12 mugs of water fill a bucket when the capacity of each mug is 13.5 liters. How many mugs will be needed to fill the same bucket, if the capacity of each mug is 9 liters?

(a) 12 (b) 14 (c) 16 (d) 18

Q 16: 8 women can dig a pit in 20 hours. If a woman works half as much again as a boy, then 4 women and 9 boys can dig a similar pit in:

(a) 10 hours (b) 12 hours (c) 15 hours (d) 16 hours

Q 17: 8 boys and 12 girls complete a certain piece of work in 9 days. If each boy takes twice the time taken by a girl to finish the work, in how many days will 12 girls finish the same work ?

(a) 8 (b)15 (c) 9 (d) 12

Q 18: 10 men can finish a piece of work in 10 days, where as it take 12 women to finish it in 10 days. If 15 men and 6 women undertake to complete the work, how many days will they take to complete it?

(a) 2 (b) 4 (c) 5 (d) 11

Q 19: If 3 farmers or 4 tractors can plough a field in 43 days, then the number of days that 7 farmers and 5 tractors take to plough it is:

(a) 12 (b) 18 (c) 24 (d) 30

Q 20: 12 men or 18 women can reap a field in 14 days. The number of days that 8 men and 16 women will take to reap it is:

(a) 5 (b) 7 (c) 8 (d) 9

Q 21: A alone can finish a work in 10 days and B alone can do it in 15 days. If they work together and finish, then out of a total wages of Rs.75. A will get:

(a) Rs.30 (b) Rs.37.50 (c) Rs.45 (d) Rs.50

Q 22: A can do a certain job in 12 days. B is 60% more efficient than A. The number of days it takes for B to do the same piece of work is:

(a) 6 (b) $6\frac{1}{4}$ (c) $7\frac{1}{2}$ (d) 8

Q 23: A is thrice as good a work man as B and takes 10 days less to do a piece of work than B takes. B can do the work in:

(a) 12 days (b) 15 days (c) 20 days (d) 30 days

Q 24: A, B and C together earn Rs.150 per day while A and C together earn Rs.94 and B and C together earn Rs.76. The daily earning of C is:

(a) Rs.75 (b) Rs.56 (c) Rs.34 (d) Rs.20

Q 25: A can complete a job in 9 days B in 10 days and C in 15 days. B and C start the work and are forced to leave after 2 days. The time taken to complete the remaining work is:

(a) 6 days (b) 9 days (c) 10 days (d) 13 days

TIME AND WORK – WORKSHEET (Progressive)

Q 1: A and B can together do a piece of work in 15 days. B alone can do it in 20 days. In how many days can A alone do it?

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

Q 2: Rahul can do a work alone in 10 days while Gandhi can do it alone in 15 days and Pappu alone can destroy the entire work in 12 days. How many days will they take to complete the work if they work alternately with Rahul work on first day, Gandhi on 2nd day and Pappu on 3rd day and so on?

(a) 39 days (b) $33\frac{1}{6}$ days (c) $33\frac{5}{6}$ days (d) None of these

Q 3: Two pipes A and B can fill a cistern in $7\frac{1}{2}$ and 5 minutes respectively, and a tap C can empty 60% of the cistern in 9 minutes. All three were opened simultaneously when the cistern was empty. The tap C was closed after one minute. How many more minutes would it take for the cistern to be filled?

(a) $2\frac{1}{5}$ minute (b) $3\frac{1}{5}$ minute (c) 2.5 minute (d) none of these

Q 4: 4 men and 3 women can do a task in 6 hours. 5 men and 7 women can do the same task in 4 hours. Nearly how long will it take for 1 man and 1 woman to do the same task?

(a) 5 hours (b) 12 hours (c) 25 hours (d) 22 hours

Q 5: Saania and Mirza, working together, solve a work-related problem in 5 minutes. If Saania worked twice as efficiently as she does now and Mirza worked half as efficiently as she does now, they could solve the problem in 4 minutes. Assuming the work done is proportional to the time spent and efficiency, how much time would it take Saania alone to solve the problem?

(a) 10 minutes (b) 8 minutes (c) 12 minutes (d) none of these

Q 6: A leak in the lower portion of a tank can empty the full tank in 9 hrs. An inlet pipe fills water at the rate of 10 liter a minute. When the tank is full, the inlet is opened and due to leak, the tank is empty in 16 hrs. How many litres does the cistern hold?

(a) 17,580 (b) 17,960 (c) 18,290 (d) 12,342

Q 7: If 2 women work together, they complete the work in 6 hours. One woman completes the work 5 hours faster than the second one. How many hours it take the second woman to complete the work?

(a) 20 hours (b) 38 hours (c) 15 hours (d) 30 hours

Q 8: A does half as much work as B in three-fourth of the time. If together they take 18 days to complete a work, how much time shall B take to do it?

(a) 30 days (b) 35 days (c) 40 days (d) None of these

Q 9: A tank can be filled by a pipe in 20 minute and by another pipe in 60 min. Both the pipes are kept open for 10 min. and then the first pipe is shut off. After this, the tank will be completely filled in

(a) 10 min. (b) 12 min. (c) 15 min. (d) 20 min.

Q 10: A group of workers was put on a job. From the second day onwards, one worker was withdrawn each day. The job was finished when the last worker was withdrawn. Had no worker been withdrawn at any stage, the group would have finished the job in 33% lesser time. The initial number of workers in the group was

(a) 6 (b) 3 (c) 5 (d) 10

Q 11: A water tank has 3 taps A, B and C. A fills 4 buckets in 24 minutes. B fills 8 buckets in 1 hour and C fills 2 buckets in 20 min's. If all the taps are opened together, a full tank is emptied in 2 hours. If a bucket contains 5L water, what is the capacity of the tank?

(a) 120L (b) 240L (c) 180L (d) 60L

Q 12: Two farmers undertake the task to plough a field. The second farmer begins working one day after the first one. 3 days after the first farmer had begun working; there was still 9/20 of the field to be ploughed. When the work was completed, it turned out that each farmer had ploughed exactly half of the field. How many days would it take for the second farmer to plough the complete field by himself?

(a) 12 days (b) 8 days (c) 10 days (d) 9 days

Q 13: If a man or 2 women or 3 boys can do a piece of work in 44 days, then the same piece of work will be done by 1 man, 1 woman and 1 boy in:

(a) 21 days (b) 24 days (c) 26 days (d) 33 days

Q 14: Three farmers paid Rs.1000 for some quantity of pasture. The first farmer grazed his 9 mules for some time on the pasture; the second farmer grazed his 12 cows for twice the time taken by the mules of the first farmer. The third farmer grazed some goats for two and a half times the time for which the second farmer grazed his cows. The third farmer paid half the total cost of the pasture. If 6 cows eat as much as 4 mules while 10 goats eat as much as 3 cows, how much did the first and second man, respectively, pay?

(a) 100, 400 (b) 180, 320 (c) 130, 320 (d) 150, 350

Q 15: Two pipes P and Q can fill a cistern in 12 min. and 15 min. respectively but a third pipe 'R' can empty the full tank in 6 min. P and Q are kept open for 5 min. in the beginning and then 'R' is also opened. In what time is the cistern emptied?

(a) 30 min. (b) 33 min. (c) 37.5 min. (d) 45 min.

Q 16: A cistern can be filled in 9 hours. But it takes 10 hours, due to a leak in its lower part. If the cistern is full, then the time that the leak will take to empty it, is:

(a) 60min. (b) 70min. (c) 80min. (d) 90min.

Q 17: X is 25% more efficient than Y and his hourly wages are 25% more. If X is paid Rs. 75, how much will Y receive for the same work?

(a) 65 (b) 90 (c) 75 (d) 110

Q 18: To fill a cistern, pipes P, Q & R take 20, 15 & 12 minutes respectively. The time in minutes that the three pipes together will take to fill the cistern is:

(a) 5 min. (b) 10 min. (c) 12 min. (d) 15.66 min.

Q 19: Jay and Veer working by themselves can build a wall respectively in 16 days and 25 days more than what they would take when working together. In how many days can Jay alone build the wall?

(a) 20 (b) 36 (c) 45 (d) None of these

Q 20: A can complete a piece of work in 4 days. B takes double the time taken by A, C takes double that of B and D takes double that of C to complete the same task. They are paired in groups of two each. One pair takes two-thirds the time needed by the second pair to complete the work. Which is the first pair?

(a) A, B (b) A, C (c) B, C (d) A, D

Answer Key - Basic

1. A	2. D	3.C	4. C	5. D	6. D	7. A	8.C	9. C	10.C
11.C	12.C	13.D	14.D	15.D	16.D	17.D	18.C	19.A	20.D
21.C	22.C	23.B	24.D	25.A					

Answer Key - Progressive

1.d	2.d	3.a	4.d	5.a	6.d	7.c	8.a	9.d	10.b
11.b	12.b	13.b	14.b	15.d	16.d	17.c	18.a	19.b	20.d