1) A pipe can fill a tank in x hours and another can empty it in y hours. They can together fill it in (y > x)

a) $\frac{xy}{x-y}$ hours b) $\frac{xy}{y-x}$ hours
c) x - y hours d) y - x hours

2) Two pipes A and B can separately fill a cistern in 60 minutes and 75 minutes respectively. There is a third pipe in the bottom of the cistern to empty it. If all the three pipes are simultaneously opened, then the cistern is full in 50 minutes. In how much time the third pipe alone can empty the cistern?

a) 90 minutes b) 110 minutes
c) 100 minutes d) 120 minutes

3) Two pipes can fill a cistern separately in 10 hours and 15 hours. They can together fill the cistern in

a) 9 hours b) 6 hours
c) 7 hours d) 8 hours

4) A cistern is provided with two pipes A and B. A can fill it in 20 minutes and B can empty it in 30 minutes. If A and B be kept open alternately for one minute each, how soon will the cistern be filled ?

a) 120 minutes b) 121 minutes
c) 110 minutes d) 115 minutes

5) A cistern can be filled with water by a pipe in 5 hours and it can be emptied by a second pipe in 4 hours. If both the pipes are opened when the cistern is full, the time in which it will be emptied is :

a) $20\frac{1}{2}$ hours b) 9 hours
c) 18 hours d) 20 hours

6) Two pipes can fill a tank in 15 hours and 20 hours respectively, while the third can empty it in 30 hours. If all the pipes are opened simultaneously, the empty tank will be filled in

a) $15\frac{1}{2}$ hours b) 10 hours
c) 12 hours d) 15 hours

7) Two pipes, P and Q, together can fill a cistern in 20 minutes and P alone can in 30 minutes. Then Q alone can fill the cistern in

a) 51 minutes b) 62 minutes
c) 60 minutes d) 61 minutes

8) Three pipes P, Q and R can separately fill a cistern in 4,8 and 12 hours respectively. Another pipe S can empty the completely filled cistern in10 hours. Which of the following arrangements will fill the empty cistern in less time than others ?

a) P, Q and S are open.
b) Q alone is open.
c) P and S are open.
d) P, R and S are open.

9) 12 pumps working 6 hours a day can empty a completely filled reservoir in 15 days. How many such pumps working 9 hours a day will empty the same reservoir in 12 days ?

a) 12 b) 15
c) 9 d) 10

10) Three taps A,B and C together can fill an empty cistern in 10 minutes. The tap A alone can fill it in 30 minutes and the tap B alone in 40 minutes. How long will the tap C alone take to fill it ?

a) 40 minutes b) 16 minutes
c) 24 minutes d) 32 minutes

11) A tap can fill a cistern in 8 hours and another tap can empty it in 16 hours. If both the taps are open, the time (in hours) taken to fill the tank will be :

a) 24 b) 8
c) 10 d) 16

12) Two pipes A and B can fill a tank in 36 minutes and 45 minutes respectively. Another pipe C can empty the tank in 30 minutes. First A and B are opened. After 7 minutes, C is also opened. The tank is filled up in

a) 45 minutes b) 39 minutes

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c) 46 minutes d) 40 minutes

13) Two pipes X and Y can fill a cistern in 24 minutes and 32 minutes respectively. If both the pipes are opened together, then after how much time (in minutes) should Y be closed so that the tank is full in 18 minutes ?

a) 5 b) 10
c) 8 d) 6

14) Two pipes can fill a cistern in 3 hours and 4 hours respectively and a waste pipe can empty it in 2 hours. If all the three pipes are kept open, then the cistern will be filled in :

a) 12 hours b) 5 hours
c) 8 hours d) 10 hours

15) If two pipes function simultaneously, a tank is filled in 12 hours. One pipe fills the tank 10 hours faster than the other. How many hours does the faster pipe alone take to fill the tank?

a) 12 hrs b) 20 hrs
c) 18 hrs d) 15 hrs

16) Three taps A, B, C can fill an overhead tank in 4, 6 and 12 hours respectively. How long would the three taps take to fill the tank if all of them are opened together ?

a) 5 hrs. b) 2 hrs.
c) 4 hrs. d) 3 hrs.

17) Two pipes A and B can separately fill a tank in 2 hours and 3 hours respectively. If both the pipes are opened simultaneously in the empty tank, then the tank will be filled in

a) 1 hour 20 minutes
b) 1 hour 12 minutes
c) 2 hours 30 minutes
d) 1 hour 15 minutes

18) Pipe A can fill an empty tank in 6 hours and pipe B in 8 hours. If both the pipes are opened and after 2 hours pipe. A is closed, how much time B will take to fil the remaining tank?

a) $3\frac{1}{3}$ hours b) $7\frac{1}{2}$ hours
c) $2\frac{2}{5}$ hours d) $2\frac{1}{3}$ hours

19) Two pipes A and B can fill a tank in 20 minutes and 30 minutes respectively. If both pipes are opened together, the time taken to fill the tank is :

a) 15 minutes b) 50 minutes
c) 12 minutes d) 25 minutes

20) One tap can fill a water tank in 40 minutes and another tap can make the filled tank empty in 60 minutes. If both the taps are open, in how many hours will the empty tank be filled?

a) 3.5 hours b) 2 hours
c) 2.5 hours d) 3 hours

21) Two pipes A and B can fill a cistern in 3 hours and 5 hours respectively. Pipe C can empty in 2 hours. If all the three pipes are open, in how many hours the cistern will be full?

a) 30 hours b) can't be filled
c) 10 hours d) 15 hours

22) A tank can be filled by pipe A in 2 hours and pipe B in 6 hours. At 10 A.M. pipe A was opened. At what time will the tank be filled if pipe B is opened at 11 A.M.?

a) 12 P.M. b) 12.45 A.M.
c) 5 P.M d) 11.45 A.M.

23) A tap can empty a tank in one hour. A second tap can empty it in 30 minutes. If both the taps operate simultaneously, how much time is needed to empty the tank?

a) 45 minutes b) 20 minutes
c) 30 minutes d) 40 minutes

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24) A water tank can be filled by a tap in 30 minutes and another tap can fill it in 60 minutes. If both the taps are kept open for 5 minutes and then the first tap is closed, how long will it take for the tank to be full ?

a) 45 minutes b) 20 minutes
c) 25 minutes d) 30 minutes

25) A pipe can fill a tank in 'x' hours and another pipe can empty it in'y' (y > x) hours. If both the pipes are open, in how many hours will the tank be filled ?

a) $\frac{xy}{y-x}$ hours b) (x - y) hours
c) (y - x) hours d) $\frac{xy}{x-y}$ hours

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