**Studytonight – Pipes and Cisterns – Aditya Jain**

1. **Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both pipes are used together, then how long will it take to fill the tank?**
2. **12 min**
3. 15 min
4. 25 min
5. 50 min
6. **A tap can fill a tank in 6 hours. After half the tank is filled, three more similar taps are opened. What is the total time taken to fill the tank completely?**
7. 3 hrs. 15 min
8. **3 hrs. 45 min**
9. 4 hrs
10. 4 hrs. 15 min
11. **A water tank is two-fifth full. Pipe A can fill a tank in 10 minutes and pipe B can empty it in 6 minutes. If both the pipes are open, how long will it take to empty or fill the tank completely?**
12. **6 min to empty**
13. 6 min to fill
14. 9 min to empty
15. 9 min to fill
16. **Three pipes A, B and C can fill a tank from empty to full in 30 minutes, 20 minutes and 10 minutes respectively. When the tank is empty, all the three pipes are opened. A, B and C discharge chemical solutions P, Q and R respectively. What is the proportion of solution R in the liquid in the tank after 3 minutes?**
17. 5/11
18. **6/11**
19. 7/11
20. 8/11
21. **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?**
22. 90 min
23. **100 min**
24. 110 min
25. 120 min
26. **Tow taps A and B can fill a tank in 5 hours and 20 hours respectively. If both the taps are opened then, due to the leakage, it took 30 minutes more to fill the tank. If the tank is full, how long will it take for the leakage alone to empty the tank?**
    1. 4 hrs
    2. 9 hrs
    3. 18 hrs
    4. **36 hrs**
27. **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?**
28. 1 hrs
29. 2 hrs
30. **6 hrs**
31. 8 hrs
32. **A tank is filled by three pipes with uniform flow. The first two pipes operating simultaneously fill the tank in the same time during which the tank is filled by the third pipe alone. The second pipe fill the tank 5 hours faster than the first pipe and 4 hours slower than the third pipe. The time required by the first pipe is?**
    1. 6 hrs
    2. 10 hrs
    3. **15 hrs**
    4. 30 hrs
33. **Two taps A and B can fill in 12 minutes and 15 minutes respectively. If both the taps are opened simultaneously, and the tap A is closed after 3 minutes, then how much more time will it take to fill the tank by tap B?**
    * + - 1. 7 min 15 sec
          2. 7 min 45 sec
          3. 8 min 5 sec
          4. **8 min 15 sec**
34. **Two pipes A and B can fill in 15 hours and 20 hours respectively while a third pipe C can empty the full tank in 25 hours. All the three pipes are opened in the beginning. After 10 hours, C is closed. In how much time, will the tank be full?**
35. **12 hrs**
36. 13 hrs
37. 16 hrs
38. 18 hrs
39. **A large tanker can be filled by two pipes A and B in 60 minutes and 40 minutes respectively. How many minutes will it take to fill the tanker from empty state if B is used for half the time and A and B fill it together for the other half?**
    * + - 1. 15 min
          2. 20 min
          3. 27.5 min
          4. **30 min**
40. **Two pipes A and B can fill a cistern in 12 minutes and 15 minutes respectively, while a third pipe C can empty the full tank in 6 minutes. A and B are kept open for 5 minutes in the beginning and then C is also opened. In what time is the cistern emptied?**
    * + - 1. 30 min
          2. 33 min
          3. 35 min
          4. **45 min**
41. **Three taps A, B and C can fill a tank in 12, 15 and 20 hours respectively. If A is open all the time and B and C are open for one hour alternately, the tank will be full in ?**
42. 6 hrs
43. 4 hrs
44. **5 hrs**
45. 7 hrs
46. **A booster pump can be used for filling as well as for emptying a tank. The capacity of the tank is 2400 m3. The emptying capacity of the tank is 10m3 per minute higher than its filling capacity and the pump needs 8 minutes lesser to empty the tank than it needs to fill it. What is the filling capacity of the pump?**
    * + - 1. **50 m3/min**
          2. 60 m3/min
          3. 72 m3/min
          4. None of these
47. **Two pipes can fill a tank in 20 and 24 minutes respectively and a waste pipe can empty 3 gallons per minute. All the three pipes working together can fill the tank in 15 minutes. The capacity of the tank is?**
    * + - 1. 60 gallons
          2. 100 gallons
          3. **120 gallons**
          4. 180 gallons