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## AIIMS Logical Reasoning Pipes and Cistern 2023 Part 2 NET, IAS, State-SET (KSET, WBSET, MPSET, etc.), GATE, CUET, Olympiads etc.

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1. pipes P and Q would fill a cistern 18 and 24 minutes respectively. Both pipes being opened, find when the first pipe must be turned off so that the cistern may be just filled in 12 minutes?

- A. after 12 mins
- B. after 9 mins
- C. after  $8\frac{1}{2}$  mins
- D. after 10 mins

Answer: B

2. A cistern which could be filled in 9 hours takes one hour more to be filled owing to a leak in its bottom. If the cistern is full in what time will the leak empty it?

- A. 45 hrs
- B. 60 hrs
- C. 75 hrs
- D. 90 hrs

Answer: D

3. A pipe can fill a cistern in 20 minutes whereas the cistern when full can be emptied by a leak in 28 minutes. When both pipes are opened, find when the cistern will be full?

- A. 60 min
- B. 80 min
- C. 70 min
- D. 48 min

Answer: C

4. Pipes A and B can fill a cistern in 8 and 24 minutes respectively. They are opened an alternate minutes. Find how many minutes, the cistern shall be full?

- A. 6 min

- B. 12 min
- C. 19 min
- D. 10 min

Answer: B

5. A cistern has three pipes, A, B and C. The pipes A and B can fill it in 4 and 5 hours respectively and C can empty it in 2 hours. If the pipes are opened in order at 1, 2 and 3 A.M. When will the cistern be empty?

- A. 3 PM
- B. 7 PM
- C. 4 PM
- D. 5 PM

Answer: D

6. Three pipes of same capacity can fill a tank in 8 hours. If there are only two pipes of same capacity, the tank can be filled in.

- A. 17 hours
- B. 12 hours
- C. 16 hours
- D. 24 hours
- E. None of these

Answer: B

7. Two pipes can fill a tank in 18 minutes and 15 minutes. An outlet pipe can empty the tank in 45 minutes. If all the pipes are opened when the tank is empty, then how many minutes will it take to fill the tank?

- A. 12
- B. 13
- C. 11
- D. 10
- E. None of these

Answer: D

8. Pipe A can fill a tank in 16 minutes and pipe B can empty it in 24 minutes. If both the pipes are opened together after how many minutes should pipe B be closed, so that the tank is filled in 30 minutes?

- A. 20
- B. 24
- C. 23
- D. 22

E. None of these

Answer: E

9. Pipe A can fill a tank in 6 hours. Due to a leak at the bottom, it takes 9 hours for the pipe A to fill the tank. In what time can the leak alone empty the full tank?

A. 16 hours

B. 15 hours

C. 18 hours

D. 17 hours

E. None of these

Answer: C

10. A tank is filled in eight hours by three pipes A, B and C. Pipe A is twice as fast as pipe B, and B is twice as fast as C. How much time will pipe B alone take to fill the tank?

A. 24 hours

B. 28 hours

C. 32 hours

D. 36 hours

E. None of these

Answer: B

11. Two pipes A and B can fill a tank in 20 and 30 minutes respectively. If both the pipes are used together, then how long will it take to fill the tank?

A. 12 min

B. 15 min

C. 25 min

D. 50 min

Answer: A

12. A cistern can be filled by a tap in 4 hours while it can be emptied by another tap in 9 hours. If both the taps are opened simultaneously, then after how much time will the cistern get filled?

A. 4.5 hrs

B. 5 hrs

C. 6.5 hrs

D. 7.2 hrs

Answer: D

13. 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?

- A. 3 hrs 15 min
- B. 3 hrs 45 min
- C. 4 hrs
- D. 4 hrs 15 min

Answer: B

14. 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?

- A. 6 min. to empty
- B. 6 min. to full
- C. 9 min. to empty
- D. 9 min. to full

Answer: A

15. Pipe A can fill a tank in 5 hours, pipe B in 10 hours and pipe C in 30 hours. If all the pipes are open, in how many hours will the tank be filled?

- A. 2
- B. 2.5
- C. 3
- D. 3.5

Answer: C