

Pipes And Cistern Questions Overview

Pipes And Cistern Questions have a good weightage in the Banking Exam and the type of question asked in Banking exam is similar to the question mentioned below. It has been solved and explained by Gargi.ai Experts and they have tried to elaborate the concept used in Pipes And Cistern Questions.

Question

Two pipes A and B can fill a tank in 12 hours and 18 hours respectively. If they reopened on alternate hours and if pipe A is opened first, in how many hours, the tank shall be full?

Difficulty : Moderate

Average Time : 35 Seconds

Options :

1. 13 hours
2. 13hours 30 minutes
3. 14 hour 40 minutes
4. 14 hours 10 minutes
5. 15 hours

Solution

The correct answer is **Option 4** i.e. **14 hours 10 minutes**

Concept	Application
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A's work in 1 hour = $(1/12)$

B's work in 1 hour = $(1/18)$

(A + B)'s work in 2 hours
when opened alternatively:

$$= (1/12 + 1/18) = (5/36)$$

If a pipe can fill
a tank in p
hours, then:
part filled in
1 hour = $(1/p)$

(A + B)'s work in 14 hours
work = $35/36$

$$\text{Remaining part} = 1 - 35/36 = 1/36$$

This remaining part will be
done by A in $(12 \times 1/36)$

i.e. in $(1/3)$ hour or in 20min.

therefore, total time is taken
to fill the tank =

14 hours 10min