

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 10 minutes and 15 minutes respectively. Both the pipes are opened together but after 5 minutes, pipe A is turned off. What is the total time required to fill the tank?

Difficulty : Moderate

Average Time : 35 Seconds

Options :

1. 6min
2. 7min 30sec
3. 7min
4. 6min 30sec
5. none of the above

Solution

The correct answer is **Option 2** i.e. **7min 30sec**

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

$$\begin{aligned} \text{Part filled in 5 minutes} &= (1/10 + 1/15) \times 5 \\ &= (5/30) \times 5 = (5/6) \end{aligned}$$

Remaining part = $1/6$

$$\text{Part filled by B in 1 minute} = 1/15$$

$$(1/6) \text{ part will be filled in } (15/6) = 2\text{min } 30\text{sec}$$

$$\begin{aligned} \text{Therefore total time} &= 5\text{min} + 2\text{min } 30\text{sec} \\ &= 7\text{min } 30\text{sec} \end{aligned}$$

