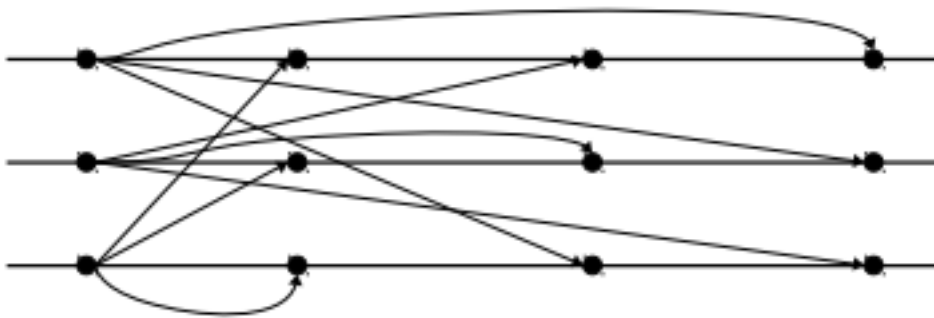


## Exercise Session 4 Broadcast

### Exercise 1

In distributed systems, total order broadcast is a broadcast messaging protocol that ensures that messages are received reliably and in the same order by all processes. Consider the broadcast execution below. Which of the following statements are true about this execution?

1. The execution is a correct causal broadcast execution.
2. The execution is a correct total order broadcast execution
3. The execution is a correct uniform reliable broadcast execution
4. None of the above



### Exercise 2

Sketch an execution history with two processes  $p_1$  and  $p_2$ , that satisfies the properties of Reliable Causal Broadcast but does not satisfy Uniform Causal Broadcast.