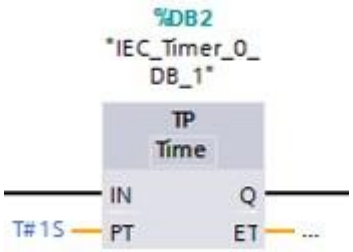
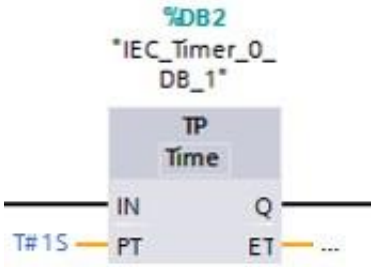
Quiz 4 – Understanding Timer operations in TIA

1. What does "**PT**" represents in this timer



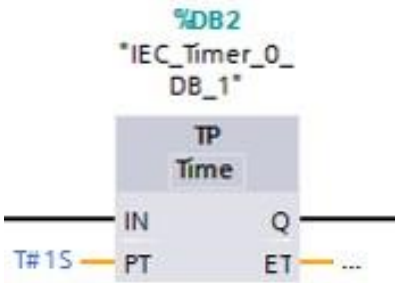
- Current time
- **Preset time**

2. In the below timer if "**IN**" is enabled for 5 seconds what will be the output "**Q**" of timer?



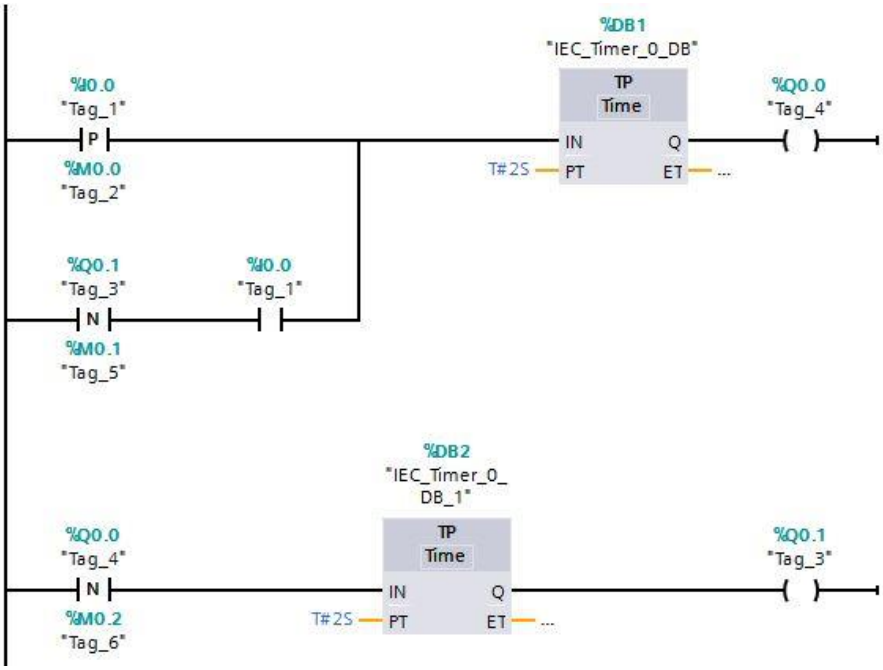
- **'Q' will be ON for 1 second then OFF**
- 'Q' will be ON after 1 second, stays ON for 1 second and then gets OFF

3. In the below timer if "**IN**" is enabled for 0.1 seconds what will be the output "**Q**" of timer?



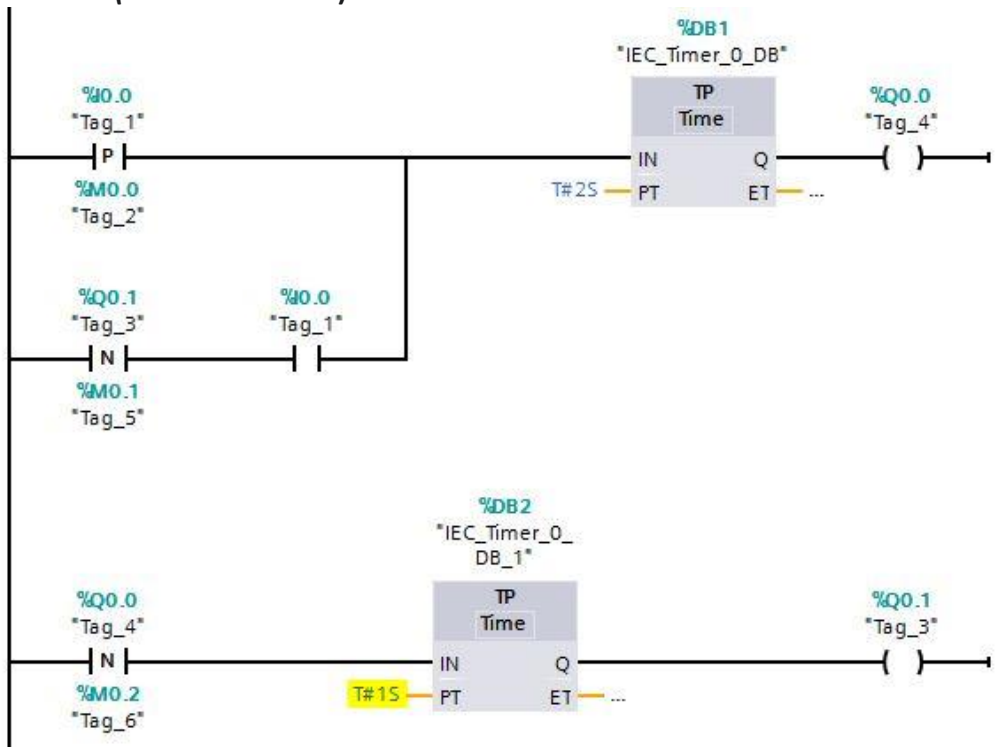
- 'Q' will be ON after 0.1 second, stays ON for 0.1 second and then OFF
- 'Q' will not be ON
- **'Q' will be ON for 1 second and then OFF**

4. What will the **output status of Q0.0 and Q0.1** when **I0.0 is TRUE?**



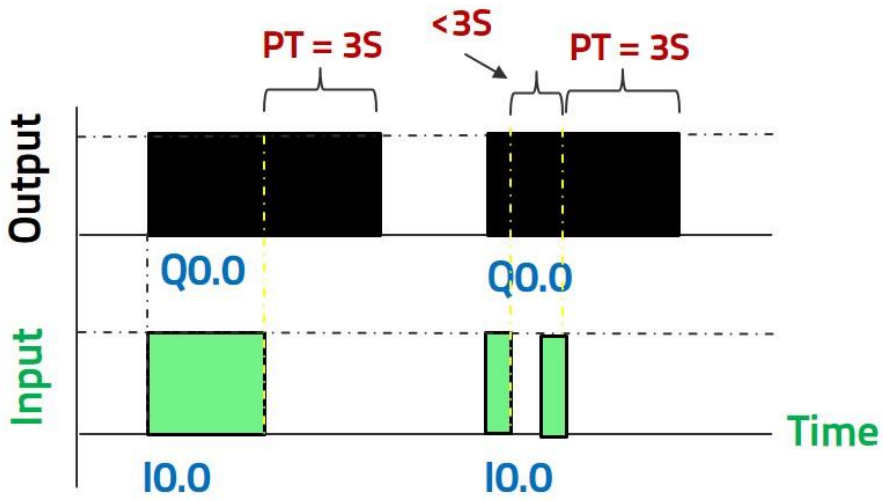
- Output Q0.0 and Q0.1 will blink simultaneously with delay of 1 second
- Output Q0.0 and Q0.1 will blink alternatively with delay of 1 second
- Output Q0.0 and Q0.1 will blink simultaneously with delay of 2 seconds
- **Output Q0.0 and Q0.1 will blink alternatively with delay of 2 seconds**

5. What will happen with the blinking frequency if we change the time of **TP (%DB2) to 1 Second *(as shown below)*?**



- 'Q0.0' will be ON for 1 second in the blinking sequence
- **'Q0.1' will be ON for 1 second in the blinking sequence**

6. Below is the **timing graph** of which **type of Timer?**



- Timer Pulse
- TON- Timer on Delay
- **TOFF- Timer OFF Delay**
- TONR- Retentive ON Delay

7. The _____ sets the output (Q) to ON after a preset time delay. The elapsed time is accumulated over multiple timing periods until the reset (R) input reset the elapsed time

- Timer Pulse
- Timer On Delay
- Timer OFF Delay
- **Timer- Retentive ON Delay**

8. In which of the Timer changing PT has no effect while the timer runs, but has an effect when the timer resumes.

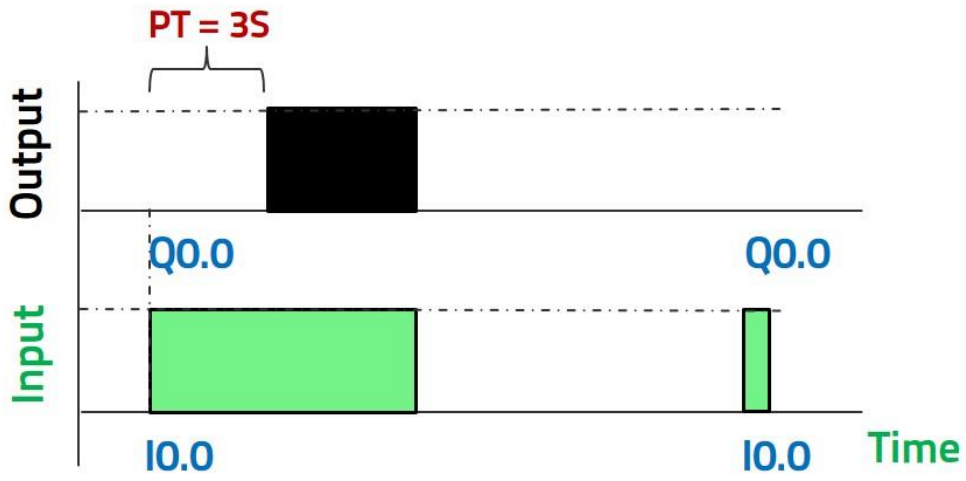
- Timer Pulse
- Timer ON Delay
- Timer OFF Delay
- **Timer- Retentive ON Delay**

9. The ___ timer sets the output (Q) to ON and then resets the output to OFF after a preset time delay.

- Timer Pulse
- Timer ON Delay

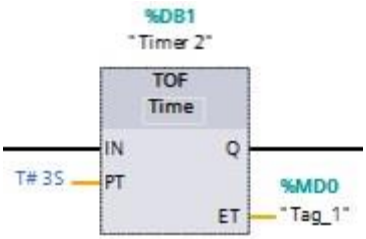
- **Timer OFF Delay**
- Timer- Retentive ON Delay

10. The following graph represents which timer?



- Timer Pulse
- **Timer ON Delay**
- Timer OFF Delay
- Timer- Retentive ON Delay

11. In the below Timer, **what will be the behavior of the Output "Q"** when IN is enabled?



- It will be ON after 3 seconds
- It will be ON for 3 seconds
- It will not be ON At all
- **It will remain ON with 'IN'**

12. Which timer behavior is depicted by the following statement:
"Changing IN to FALSE, while the timer runs, resets and stops the timer."

- Timer Pulse
- **Timer ON Delay**
- Timer OFF Delay

- Timer- Retentive ON Delay

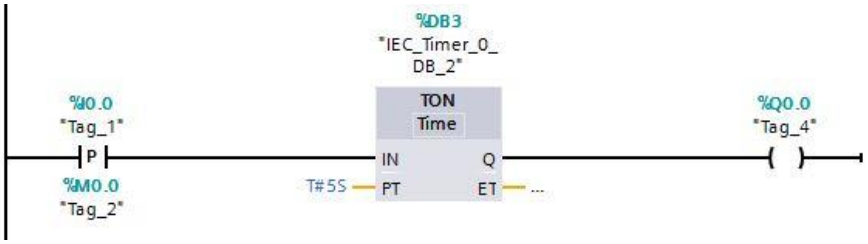
13. In the below FBD, What will happen if at instant when **ET is at 5th second**, **IN** transition from **TRUE to FALSE** and then after delay of 1 second **FALSE to TRUE?**

- Timer will reset and start counting from 0th second
- Timer will pause and resume from 6th second
- **Timer will pause and resume counting from 5th second**

14. The parameters of TON are stored in Data block which can be accessed anywhere in the logic by using the specific address

- **True**
- False

15. In the below ladder logic, What will happen if the **I0.0 is TRUE**



- Q0.0 will be ON after delay of 5 seconds
- Q0.0 will be ON for 5 seconds and then OFF
- Q0.0 will blink with delay of 5 seconds
- Q0.0 will be ON for a pulse duration (equivalent to SCAN cycle)
- **Q0.0 will not be ON**