

Moderate

Assistant Engineer (Electrical), Class 2025

Building Department

In mode 2, if N is loaded as the count value, then after (N - 1) cycles, the output becomes low for

A

1 clock cycle

Correct

B

2 clock cycles

C

3 clock cycles

D

4 clock cycles

Correct Answer: A

Full Detailed Explanation

Concept & Reasoning Mode 2 behaves like a divide-by-N periodic rate generator. OUT is normally HIGH. When the count reaches 1/terminal event, OUT goes LOW for one clock and then returns HIGH as the count reloads. This makes it useful for periodic interrupt or baud-rate generation. How to Solve It in the Exam 8253/8254 Mode 2 - one-clock LOW pulse every N clocks. Important Exam Point Do not confuse Mode 2 with Mode 3 square-wave generator. Related Revision Path This question sits in the revision path Microprocessors and Interfacing 8253/8254 Timer - Operating Modes .

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