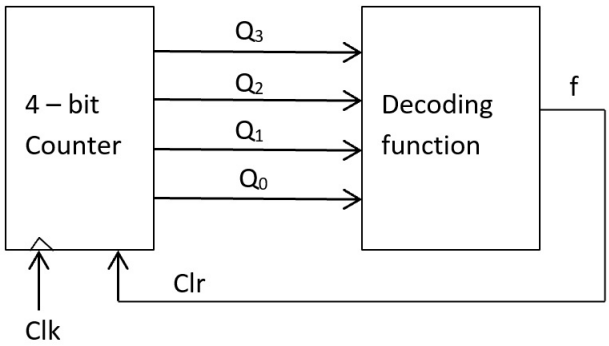
Started on	Tuesday, 12 October 2021, 10:05 AM
State	Finished
Completed on	Tuesday, 12 October 2021, 10:10 AM
Time taken	4 mins 54 secs
Marks	1.00/1.00
Grade	**10.00** out of 10.00 (**100**%)

Question 1

Correct

Mark 1.00 out of 1.00

A 4-bit modulo 16 counter can be used to implement a module 13 counter by using a suitable logic for clearing. See the block diagram given below. Note both counting up as well as clearing happens on the rising edge of the clock.



Which of the following presents the appropriate function that the decoder implements?

Select one:

- $f = Q_3 \cdot Q_2' \cdot Q_1 \, Q_0$
- $f = Q_3 \cdot Q_2 \cdot Q_1' \cdot Q_0'$ ✓
- None of the given options
- $f = Q_3 \cdot Q_2 \cdot Q_1' \cdot Q_0$
- $f = Q_3 \cdot Q_2' \cdot Q_1' \cdot Q_0$

Your answer is correct.

The correct answer is: $f = Q_3 \cdot Q_2 \cdot Q_1' \cdot Q_0'$