Design a logic circuit using the PAL16P8 with multiple outputs as following equations:

F1 (A, B, C, D) = Σm(1, 2, 10, 12, 13, 15)   F2 (A, B, C, D) = Σm(3, 10, 11, 13, 14, 15)

F3 (A, B, C, D) = Σm(0, 2, 3, 7, 8, 10, 11)

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