DLD Online 2

Section A1 & B1

Simplify using K-maps and implement the following Boolean functions using only the 7400-series IC chips: IC 74x04, IC 74x08 and IC 74x32 in your circuit.
Time: 35 minutes + 5 Minutes to submit in Moodle.

1. $f(P, Q, R, S) = \Sigma(1,3,7,11,15) + d(0,2,5)$

2. $f(P, Q, R, S) = \Sigma(2,4,5,6,7,14,15) + d(0,8,10,12,13)$

3. $f(P, Q, R, S) = \Sigma(0,3,5,6,10,15) + d(2,4,7,8,11)$

4. $f(P, Q, R, S) = \Sigma(1,6,11,12) + d(3,4,7,9,14)$

5. $f(P, Q, R, S) = \Sigma(1,7,11,13) + d(3,4,5,8,9,15)$