

**ECE 27000 Spring-22**  
**Practice Problems 5**

Note: The problems below will allow you to practice the material covered in week 5. A homework will be available separately. Do not attempt to submit practice problems for grading.

Solve the following problems considering the function

$$F(X1, X2, X3, X4, X5, X6, X7, X8) = \\ = X1 \cdot X2 + X1 \cdot X3 + X4 \cdot X5 + X4' \cdot X6 + X7 \cdot X8$$

1. The function is implemented as an AND-OR circuit with AND gates corresponding to the product terms given above. Find all the static hazards of the function.
2. Find a sum-of-products expression whose corresponding AND-OR circuit does not have any static hazards.