

〈離散數學〉資格考範圍

1. Finite algebraic structures:
 - a. Modular Mathematics and Finite fields,
 - b. Block designs,
 - c. Steiner systems,
 - d. Latin squares,

2. Counting problems:
 - a. Pigeonhole principle
 - b. Two ways counting and
 - c. Generating of combinations and permutations
 - d. Inclusion and exclusion principle and Möbius inversion formula,
 - e. Recurrence relations and generating functions,
 - f. Polya's counting formula,
 - g. Special counting problems
(Stirling numbers, Catalan number, Partition numbers etc.).

參考書目：

1. **Finite Fields For Computer Scientists And Engineers**, 作者：McEliece
2. **Introductory Combinatorics**, 作者：Brualdi
3. **Combinatorial Theory**, 作者：Marshall Hall