3.5

$$F = B \oplus C$$

3.6

$$A_1 = B_1$$

$$A_2 = B_2$$

$$A_4 = B_2 \oplus B_4$$

$$A_8 = \overline{B}_2 \overline{B}_4 \overline{B}_8$$

3.9

(1) $F = \overline{A}\overline{B}\overline{C}\overline{D}$

(2) $F = \sum m^4(3,5,6,9,10,12)$

(3) $F = \sum m^4(1,2,4,7,8,11,13,14)$

3.10

$$A_8 = BC = \overline{\overline{\overline{BC}}}$$

$$A_4 = A\overline{B} + B\overline{C} = \overline{\overline{\overline{A\overline{B}}\,\overline{B\overline{C}}}}$$

$$A_2 = \overline{A}C + A\overline{C} = \overline{\overline{\overline{\overline{A}C}\,\overline{A\overline{C}}}}$$

$$A_1 = D$$