Q1. Reduce the below Boolean expression using K-map.

$$F(A,B,C) = AB + A\overline{B}C + \overline{A}B\overline{C} + B\overline{C} + AC$$

Q.2 Find the PI's, EPI's and the minimal SOP expressions for the following

(i) $F(A, B, C, D) = \sum m (1, 2, 3, 4, 5, 6, 7, 12, 13, 15)$

(ii) $F(A, B, C, D) = \sum m (1, 4, 5, 6, 7, 11, 12, 13, 15) + d(3, 10, 14)$

Q.3 Convert the below expression into canonical forms

$$f(A,B,C) = (A+C)(B+\overline{C})(\overline{A}+C)$$