**Q3:**

(B) **TRUTH TABLE:**

|  |  |  |  |
| --- | --- | --- | --- |
| **A** | **B** | **C** | **A+BC** |
| F | F | F | **F** |
| F | F | T | **F** |
| F | T | F | **F** |
| F | T | T | **T** |
| T | F | F | **T** |
| T | F | T | **T** |
| T | T | F | **T** |
| T | T | T | **T** |

SOP = A’BC + AB’C’ + AB’C + ABC’ + ABC

**F1 = ∑ (2, 7, 9,12,13,14,15)**

**Q6: f(a, b, c, d) = a'b'cd’+ a'bcd+ ab'c’d+ abc’d'+ abc’d+ abcd'+ abcd**

**Q7:**

(B) **TRUTH TABLE:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **A** | **B** | **C** | **D** | **f** |
| 0 | 0 | 0 | 0 | **0** |
| 0 | 0 | 0 | 1 | **0** |
| 0 | 0 | 1 | 0 | **1** |
| 0 | 0 | 1 | 1 | **0** |
| 0 | 1 | 0 | 0 | **0** |
| 0 | 1 | 0 | 1 | **0** |
| 0 | 1 | 1 | 0 | **0** |
| 0 | 1 | 1 | 1 | **1** |
| 1 | 0 | 0 | 0 | **0** |
| 1 | 0 | 0 | 1 | **1** |
| 1 | 0 | 1 | 0 | **0** |
| 1 | 0 | 1 | 1 | **0** |
| 1 | 1 | 0 | 0 | **1** |
| 1 | 1 | 0 | 1 | **1** |
| 1 | 1 | 1 | 0 | **1** |
| 1 | 1 | 1 | 1 | **1** |

**Q8:** **f(a, b, c, d) = a'b'cd' + bcd + ac'd + ab**