

Q1: What are the minterms for the given pos expression: $(\sim A + \sim B + \sim C) \cdot (\sim A + B + \sim C) \cdot (\sim A + B + C) \cdot (A + \sim B + \sim C) \cdot (A + \sim B + C) \cdot (A + B + \sim C) \cdot (A + B + C)$

- A. [1]
- B. [7]
- C. [2, 4, 6]
- D. [0, 2]

Correct answer: [1]

Q2: How do you represent decimal number 59 in excess 3 BCD code

- A. 11000010
- B. 10000011
- C. 10000010
- D. 10100010

Correct answer: C. 10000010

Q3: Write the mantissa (in Hexadecimal) for the decimal number: 0.43598612045483764

- A. 5f3903
- B. 5f3994
- C. 5f3993
- D. 5f3A93

Correct answer: C. 5f3993

Q4: The POS for the given minterms - [0, 1, 4, 6] is?

- A. $(\sim A + B + \sim C) \cdot (\sim A + B + C) \cdot (A + \sim B + C) \cdot (A + B + C)$
- B. $(\sim A + \sim B + \sim C) \cdot (\sim A + B + \sim C) \cdot (\sim A + B + C) \cdot (A + \sim B + C) \cdot (A + B + C)$
- C. $(\sim A + \sim B + C) \cdot (\sim A + B + \sim C) \cdot (\sim A + B + C)$
- D. $(\sim A + \sim B + C) \cdot (\sim A + B + \sim C) \cdot (\sim A + B + C) \cdot (A + \sim B + \sim C) \cdot (A + \sim B + C) \cdot (A + B + C)$

Correct answer: $(\sim A + B + \sim C) \cdot (\sim A + B + C) \cdot (A + \sim B + C) \cdot (A + B + C)$

Q5: Convert the expression $(\sim A + \sim B + \sim C) \cdot (\sim A + \sim B + C) \cdot (\sim A + B + C) \cdot (A + \sim B + C) \cdot (A + B + \sim C)$ to SOP form

- A. $(\sim A \cdot B \cdot \sim C) + (A \cdot \sim B \cdot \sim C) + (A \cdot B \cdot C)$
- B. $(\sim A \cdot B \cdot \sim C) + (A \cdot \sim B \cdot \sim C) + (A \cdot B \cdot C)$
- C. $(\sim A \cdot \sim B \cdot \sim C) + (\sim A \cdot B \cdot \sim C) + (\sim A \cdot B \cdot C) + (A \cdot \sim B \cdot C) + (A \cdot B \cdot C)$
- D. $(A \cdot \sim B \cdot \sim C) + (A \cdot B \cdot C)$

Correct answer: $(\sim A \cdot B \cdot \sim C) + (A \cdot \sim B \cdot \sim C) + (A \cdot B \cdot C)$

Q6: What does the expression $(B \cdot \sim C)$ evaluate to, When $A=1$ $B=1$ $C=1$

A. 0

B. 1

Correct answer: 0

Q7: How do you represent decimal number 23 in 8421 BCD code

A. 00100011

B. 00110011

C. 01100011

D. 00100010

Correct answer: A. 00100011

Q8: Minimize the given expression - $(\sim A + \sim B + \sim C) \cdot (\sim A + \sim B + C) \cdot (\sim A + B + C) \cdot (A + \sim B + C) \cdot (A + B + \sim C)$

A. $F = A$

B. $F = A'B'C' + BC$

C. $F = ABC + AB'C' + A'B'C'$

D. $F = A'BC' + ABC + AB'C'$

E. $F = AB + BC'$

Correct answer: $F = A'BC' + ABC + AB'C'$

Q9: Write the mantissa (in Hexadecimal) for the decimal number: 4.309939467814039

A. 93b06

B. 9eb06

C. 99b06

D. 9ebB6

Correct answer: B. 9eb06

Q10: How do you represent decimal number 59 in excess 3 BCD code

A. 10000110

B. 10000010

C. 10000000

D. 10010010

Correct answer: B. 10000010