Quiz No. One
KEY ANSWER

Q1. De Morgan's theorems states that (X+Y)' = X'.Y' . Simply stated, this means that logically there is no difference between: a NOR and an AND gate with inverted inputs

Q2. If two adjacent *1*s are detected in the input, the output is set to high input combinations will be 1100

Q3. On solving the expression Y = (a+c+d).(a+c+d').(a+c'+d).(a+d'), we get the value of Y to be: a

Q4. The number of bits needed to address **4K** memory is 12

Q5. The complement of the Boolean expression $(C \oplus D)'\ (B+D+C)$ may be simplified as CD+C'D'.

Q6. How many *1*s are there in the binary representation of 15 x 256 + 5 x 16 + 3? 8

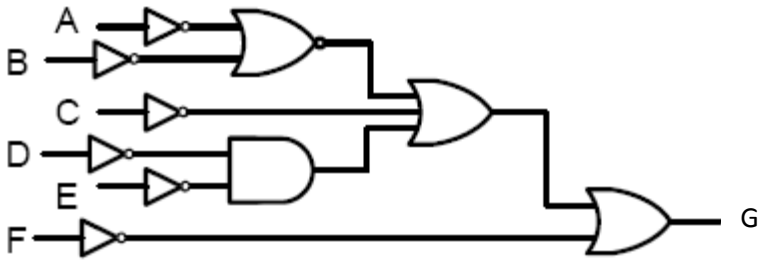
Q7. The simplification of the Boolean expression $A'BC'AB'C$ is 0

Q8. The Boolean expression $A'.B + A.B' + A.B$ is equivalent to A+B

Q9. Which of the following combinations of gates does not allow the implementation of an arbitrary Boolean function? OR gates and exclusive – OR gates only

Q10. Which of the following sets represents a universal logic family? NAND

Q11. Which of the following expression represents the given circuit? G= F' + D'E' +C' + AB



Q12. Which of the following expressions represent the given circuit?

F= (A ⊕B)' ⊕ (B'+C')

F= B(A ⊕ C)' + AB'