15 Lecture - CS302

Important Mcqs

1. **What is the purpose of a BCD adder circuit?**
   A) To add two binary numbers
   B) To add two decimal numbers
   C) To add two BCD numbers
   D) To subtract two BCD numbers

Answer: C

2. **Which type of logic gates are used in BCD adder circuit?**
   A) AND gates
   B) OR gates
   C) XOR gates
   D) All of the above

Answer: D

3. **How many bits are required to represent a single BCD digit?**
   A) 2
   B) 3
   C) 4
   D) 5

Answer: C

4. **How many full adders are required to design a 4-bit BCD adder?**
   A) 1
   B) 2
   C) 3
   D) 4

Answer: 2

5. **Which input(s) of a BCD adder are applied to the carry-in of the first full adder?**
   A) The least significant bit (LSB) of both inputs
   B) The most significant bit (MSB) of both inputs
   C) The carry-out of the previous stage and the LSB of the current stage input
   D) None of the above

Answer: D

6. **What is the maximum sum that can be generated by a single BCD adder?**
   A) 9
   B) 10

C) 15
D) 16

Answer: 9

7. **What is the carry-out of a full adder when both inputs are 1?**
   A) 0
   B) 1
   C) 2
   D) Cannot be determined

Answer: 1

8. **Which type of multiplexer is used in BCD adder to select between the carry-in and sum output of the full adder?**
   A) 2:1
   B) 4:1
   C) 8:1
   D) 16:1

Answer: A

9. **What is the purpose of the parity generator in BCD adder circuit?**
   A) To check for errors in the input data
   B) To ensure that the output is a valid BCD number
   C) To generate a parity bit for error detection
   D) None of the above

Answer: B

10. **What is the maximum number of BCD digits that can be added using an 8-bit BCD adder?**
    A) 1
    B) 2
    C) 4
    D) 8

Answer: 2