24 Lecture - CS302

Important Mcqs

1. **Which of the following is an application of the Edge-triggered D flip-flop?**
   A) Data input
   B) Data output
   C) Data storage and transfer
   D) None of the above
   <mark>Answer: C</mark>

   In a digital counter, which of the following is used to store the current count value?
   A) D flip-flop
   B) T flip-flop
   C) SR flip-flop
   D) JK flip-flop
   <mark>Answer: A</mark>

   Which type of flip-flop is used to ensure that data is sampled at the correct time?
   A) Edge-triggered D flip-flop
   B) Level-sensitive D flip-flop
   C) JK flip-flop
   D) SR flip-flop
   <mark>Answer: A</mark>

   What is the primary use of the D flip-flop in sequential logic circuits?
   A) To hold or buffer data
   B) To implement feedback signals
   C) To store the current state of a system
   D) None of the above
   <mark>Answer: C</mark>

   Which of the following is an advantage of using edge-triggered D flip-flops in data storage and transfer?
   A) Increased speed and efficiency
   B) Reduced power consumption
   C) Increased storage capacity
   D) None of the above
   <mark>Answer: A</mark>

   In a control system, what is the role of the D flip-flop?
   A) To implement logic functions
   B) To provide feedback signals
   C) Both A and B
   D) None of the above
   <mark>Answer: C</mark>

   Which of the following is an application of the D flip-flop in synchronization and timing

control?
A) Synchronizing input signals with the clock signal
B) Controlling power consumption
C) Increasing storage capacity
D) None of the above
Answer: A

How does the D flip-flop help in avoiding timing issues and glitches?
A) By using level-sensitive triggering
B) By using clock gating
C) By using edge-triggered triggering
D) None of the above
Answer: C

In a feedback control system, which of the following is used to implement logic functions?
A) D flip-flop
B) SR flip-flop
C) JK flip-flop
D) None of the above
Answer: A

Which of the following statements is true about the D flip-flop?
A) It is used to store a single bit of information.
B) Its output changes only on the falling edge of the clock signal.
C) It is not useful in sequential logic circuits.
D) None of the above
Answer: A