

CDA 3203 001& 002: Computer Logic Design

Final Exam Questions

Exam Date: 2 August 2024.

Total 20 points

I. Answer the below. (5X 2 points= 10 points)

1. What is sequential logic design and give its examples.
2. Differentiate Latches and Flipflops with valid points.
3. What is clock gating and give an example with D-latch.
4. Draw the logic diagram for the D-flipflop.
5. Draw the state diagram for SR flipflop.

II. Answer the below. (1 X 10 points = 10 points)

1. Explain JK Flipflop. Draw the JK flipflop logic structure with equivalent symbol.

Design a 3-bit synchronous binary counter using j-k flip-flops.

Hint:

Step (1) – Determine the number of flip-flops required

Step (2) – Draw the Logic diagram (with flipflop Symbols)

Step (3) – Draw timing diagram

Step (4) – Obtain the Binary state sequence for JK flipflops used in the design.

