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**CS 8351 Digital principles and system design**

**Important 13mark Questions**

**Unit I**

1. Write short notes on Demorgan's theorem. Absorption law and Consenses law.
2. Express the Boolean function  $F = A + B'C$  in a sum of minterms (SOP).

**Unit II**

1. Explain the Logic Diagram of a 4-Input Priority Encoder.
2. Explain in detail about encoders and decoders.

**Unit III**

1. Design and implementation of SR Flip-Flop using NOR gate.
2. Explain in detail about 4-bit Johnson counter.

**Unit IV**

1. Discuss about the possible hazards in sequential circuits.
2. What are called as essential hazards? How does the hazard occur in sequential circuits? How can the same be eliminated using SR latches? Give an example.

**Unit V**

1. With neat diagrams describe the working principle of programmable Array Logic.
2. Illustrate with neat sketch and describe the categories of RAM.