GOVERNMENT COLLEGE FOR WOMEN(A)

 KUMBAKONAM

 DEPARTMENT OF COMPUTER SCIENCE

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**SUBJECT : COMPUTER SYSTEM ARCHITECTURE &**

 **FUNDAMENTALS OF MICROPROCESSOR.**

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**TITLE : SEQUENTIAL CIRCUIT**

**Digital Logic circuits are basically categorized into two types :**

**Combinational circuits in which there are no feedback paths from outputs to inputs and there is no memory.**

**Sequential circuits in which feedback paths exist from outputs to inputs, and they have memory.**

**Combinational Circuits :**

* **Half adder**
* **Full adder**
* **Multiplexer**
* **Demultiplexer**
* **Encoders and Decoders**

**Sequential Circuits :**

* **Flip-Flops**
* **Register**
* **Counter**
* **Clock**

**Addition of two bits – Half Adder**

**Addition of three bits – Full Adder**

 **Flip-Flops :**

**The storage elements employed in clocked sequential circuits are called flip flops.**

**A flip flop is a binary cell capable of storing one bit of information.**

* **SR (Set,Reset) Flip Flop**
* **D (Data) Flip Flop**
* **JK Flip Flop**
* **T (Toggle )Flip Flop**

**SEQUENTIAL CIRCUITS :**

**A Sequential circuit is an interconnection of flip-flops and gates.**