**GOVERNMENT COLLEGE FOR GIRLS NACHOLI, FARIDABAD**

**LESSON PLAN**

### BCA-104 : LOGICAL ORGANIZATION OF COMPUTER-I

**JULY+AUGUST**

### UNIT - I

Information Representation: Number Systems, Binary Arithmetic, Fixed-point and Floating- point representation of numbers, BCD Codes, Error detecting and correcting codes, Character Representation – ASCII, EBCDIC, Unicode

**SEPTEMBER**

### UNIT - II

Binary Logic: Boolean Algebra, Boolean Theorems, Boolean Functions and Truth Tables, Canonical and Standard forms of Boolean functions, Simplification of Boolean Functions – Venn Diagram, Karnaugh Maps.

**OCTOBER**

### UNIT - III

Digital Logic: Introduction to digital signals, Basic Gates – AND, OR, NOT, Universal Gates and their implementation – NAND, NOR, Other Gates – XOR, XNOR etc. NAND, NOR, AND-OR-INVERT and OR-AND-INVERT implementations of digital circuits, Combinational Logic – Characteristics, Design Procedures, analysis procedures, Multilevel NAND and NOR circuits.

**NOVEMBER**

### UNIT - IV

Combinational Circuits: Half-Adder, Full-Adder, Half-Subtractor, Full-Subtractor, Parallel binary adder/subtractor, Encoders, Decoders, Multiplexers, Demultiplexers, Comparators, Code Converters, BCD to Seven-Segment Decoder.