# D.B.F. Dayanand College of Arts and Science, Solapur

## COURSE OUTCOME

Name of Department: ELECTRONICS

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### COURSE CONTENT

#### 1. Number Systems
- Binary, Octal, Decimal, Hexadecimal number systems and their inter conversions, 1’s compliment, 2’s compliment, Arithmetic operations, Signed binary numbers

To get the knowledge about number system

The student can identify the numbers.

#### 2. Binary Codes
- 8421 code, Excess-3 code, Gray code, ASCII code, Parity bit

To get the knowledge about binary codes.

The student can identify the binary codes.

#### 3. Logic Gates
- OR, AND, NOT, NAND, NOR, Ex-OR, Ex-NOR gates, Positive and Negative logic, De Morgan’s Theorems, Universality of NAND and NOR gates, Study of IC 7400, 7402, 7404, 7408, 7432, 7486

To get the knowledge about logic gates.

The student can identify the logic gates eg OR, AND, NOT etc

#### 4. Boolean Algebra
- Rules and laws of Boolean algebra, Simplification of Boolean expression, Kmap, K-maps for 2, 3 and 4 variables, Use of K-map for reduction of Boolean expressions

To solve the logical Boolean equation by using Kmap

The students can analysis Kmap.

#### 5. Arithmetic Circuits
- Exclusive OR gate as a Binary to Gray converter, Parity checker, Controlled inverter, Half adder, Full adder, Parallel binary adder, Half and Full subtractor, Block diagram of digital computer and its organization

To study the arithmetic circuits

Students can solve the arithmetic circuits.

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Signature of HOD