||Jai Sri Gurudev||

**BGS INSTITUTE OF TECHNOLOGY, B G NAGAR**

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

**COURSE OUTCOMES AND CO-PO-PSO MAPPING**

**Course Coordinator: Nethravathi H M**

**Sem & Sec: III CSE**

**Academic Year: 2020-21**

**COURSE CODE: 18CSL36**

**COURSE NAME: Analog and Digital Electronics Lab**

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| **CO1** | Understand the concepts of various Electronic devices like cathode ray oscilloscope, signal generators, digital trainer kit, millimeter and components like resistor, capacitor, opamps and integrated circuit for construct op-amps and multivibrators. |
| **CO2** | Design various combinational logic circuits |
| **CO3** | Design various types of counters and Registers using Flip-flops |
| **CO4** | Understand the concepts of simulation package to design circuits for analog and digital circuits |
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| **PSO1** | Ability to apply Mathematical Methodologies, Management Principles and Ethics, Electronics and Embedded Systems and Programming Technologies to solve real time problems. |
| **PSO2** | Ability to apply software design and development practices to develop software in emerging areas such as Internet of Things, Data Management, Social Networking and Security, Cloud and High-Performance Computing. |

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| **COs** | **POs** | | | | | | | | | | | | **PSOs** | |
| PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | P07 | PO8 | PO9 | P010 | PO11 | PO12 | PSO1 | PSO2 |
| CO1 | 2 | 2 | 1 | 2 | - | - | - | - | - | - | - | - | 2 | - |
| CO2 | 2 | 2 | 2 | 1 | - | - | - | -- | - | - | - | - | 2 | - |
| CO3 | 1 | 2 | 2 | 1 | - | - | - | -- | - | - | - | - | 3 | - |
| CO4 | - | - | - | - | 3 | - | - | -- | - | - | - | - | 1 | - |
| **AVG** | **1.66** | **2** | **1.66** | **1.33** | 3 | - | - | - | - | - | - | - | **2** | - |

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| **Cos** | **Justification** |
| **CO1-PO1** | Able to know the basic concepts of electronic devices |
| **CO1-PO2** | Able to identify and analyse the basic concepts of electronic devices |
| **CO1-PO3** | Able to design and develop using electronic device |
| **CO1-PO4** | Able to develop experimental systems of op-amps and multivibrators |
| **CO1-PSO1** | Get technical knowledge of electronic devices |
| **CO2-PO1** | Able to know the basic concepts of combinational logic circuits |
| **CO2-PO2** | Able to identify and analyse the basic concepts of combinational logic circuits |
| **CO2-PO3** | Able to design and develop using combinational logic circuits |
| **CO2-PO4** | Able to develop experimental systems of combinational logic circuits |
| **CO2-PSO1** | Get technical knowledge of combinational logic circuits |
| **CO3-PO1** | Able to know the basic concepts of counters and registers |
| **CO3-PO2** | Able to identify and analyse the basic concepts of counters and registers |
| **CO3-PO3** | Able to design and develop using counters and registers |
| **CO3-PO4** | Able to develop experimental systems of counters and registers |
| **CO3-PSO1** | Get technical knowledge of counters and registers |
| **CO4-PO5** | Able to execute the digital and analog circuits using Xlinx and Multisim software |
| **CO4-PSO1** | Get technical knowledge of using Xlinx And Multisim |