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|  | **G.B.N Govt Polytechnic, Nilokheri**  **Lesson Plan of Odd Semester** |
| Name of the faculty: | Rahul Singla |
| Discipline: | Electrical Engg. |
| Semester: | Ist |
| Subject: | Internet of Things and Artificial Intelligence |

Lesson Plan Duration: 16 Weeks (From 30 July,2018 to 30 April ,2019)

Workload (Practical) per week (In Hours)Practical-02

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| Week | Practical | Practical |
|  | Day/Hours |  |
| 1st | 1st | Understand the concepts of Internet of Things |
|  | 2nd | Build small IoT applications |
| 2nd | 3rd | Understand and analysing sensor |
|  | 4th | generated data using analytic techniques in Excel |
| 3rd | 5th | Introduction to Internet of Things (IoT) |
|  | 6th | Applications (IoT) |
| 4th | 7th | architecture |
|  | 8th | protocols |
| 5th | 9th |  |
|  |  | wireless sensors and actuators |
|  | 10th | data aggregation systems and analog-to-digital data conversion |
| 6th | 11th | data center or cloud |
|  | 12th | Characteristics of IoT |
| 7th | 13th | Physical Design of IOT |
|  | 14th | Logical Design of IoT |
| 8th | 15th | Functional blocks of IoT, |
|  | 16th | Communication Models. |
|  |  |  |
| 9th | 17th | Basics of C language |
|  | 18th | using Arduino IDE |
| 10th | 19th | Understating basics of Arduino IDE |
|  | 20th | Variables |
| 11th | 21st | datatype |
|  | 22th | loops, |
| 12th | 23rd | control statement |
|  | 24th | function |
| 13th | 25th | Practical using Arduino-interfacing sensors |
|  | 26th | Interfacing Light Emitting Diode(LED ) |
| 14th | 27th | Blinking LED |
|  | 28th | Interfacing Button and LED |
| 15th | 29th | LED blinking when button is pressed |
|  | 30th | Interfacing Light Dependent Resistor (LDR) |
| 16th | 31st | LED, displaying automatic night lamp |
|  | 32st | Interfacing Temperature Sensor(LM35 |
| 17th | 33rd | Use of sensor |
|  | 34 | Revise the previous practicals |
| 18th | 35 | Details of humidity sensor |
|  | 36 | or humidity sensor (e.g. DHT11) |

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| 19th | 37 | Interfacing Liquid Crystal Display(LCD) |
|  | 38 | Revise the previous practicals |
| 20th | 39 | display data generated by sensor on LCD |
|  | 40 | Interfacing Air Quality Sensor-pollution (e.g. MQ135) |
| 21st | 41 | display data on LCD , |
|  | 42 | Revise the previous practicals |
| 22st | 43 | switch on LED when data sensed is higher than specified value. |
|  | 44 | Interfacing Bluetooth module (e.g. HC05 |
| 23rd | 45 | Revise the practicals |
|  | 46 | receiving data from mobile phone |
| 24th | 47 | on Arduino and display on LCD |
|  | 48 | Revise the practicals |
| 25th | 49 | Interfacing Relay module to demonstrate Bluetooth |
|  | 50 | based home automation application. (using Bluetooth and relay). |
| 26th | 51 | Revise the practicals |
|  | 52 | Introduction to Artificial Intelligence (AI) |
| 27th | 53 | Machine Learning (ML), |
|  | 54 | Deep Learning (DL). |
| 28th | 55 | Role of AI in IoT |
|  | 56 | its applications |
| 29th | 57 | Managing |
|  | 58 | Analysing data generated by IoT devices |
| 30th | 59 | The Original Robotic Industry – Manufacturing |
|  | 60 | Increased intelligence |
| 31st | 61 | Big Data |
|  | 62 | Machine Learning Tasks |
| 32st | 63 | Machine Learning Applications |
|  | 64 | History and relationship to other fields |
| 33st | 65 | e.g. classification |
|  | 66 | Revise the Practicals |
| 34th | 67 | linear regression, etc. |
|  | 68 | Numerical based on above techniques |
| 35st | 69 | Revise the practicals |
|  | 70 | Understanding excel for analysing data |