**LESSON PLAN**

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| **Discipline:**  Computer Science & Engg. | **Semester:**  Sixth (6th) | **Name of the Faculty:**  Er. Satabdi Palit |
| **Subject:**  **Internet of things**  **(Th-2)** | **No. of days/week class allotted:**  Six (6) | **Semester from Date: 16.01.24** **to Date: 26.04.24**  **No. of Weeks:** 15 |
| **WEEK** | **CLASS DAY** | **THEORY TOPICS** |
| 1st | 1st | **Chapter No.- 1: Introduction to Internet of Things**  Introduction to Internet of Things ,  Introduction Characteristics of IoT |
| 2nd | Applications of IoT IoT Categories |
| 3rd | IoT Enablers and connectivity layers  Baseline Technologies |
| 4th | Sensor Actuator |
| 5th | IoT components and implementation |
| 6th | Challenges for IoT |
| 2nd | 1st | ***Review Class*** |
| 2nd | **Chapter No.- 2: Iot Networking**  Terminologies |
| 3rd | Gateway Prefix allotment , Impact of mobility on Addressing |
| 4th | Multihoming |
| 5th | Deviation from regular Web |
|  | 6th | IoT identification and Data protocols |
| 3rd | 1st | ***Review Class*** |
| 2nd | **Chapter No.- 3: Connectivity Technologies** Introduction IEEE 802.15.4 |
| 3rd | ZigBee |
| 4th | 6LoWPAN |
| 5th | RFID |
| 6th | HART and wireless HART |
| 4th | 1st | NFC, Bluetooth, Z wave |
| 2nd | ISA100.11.A |
| 3rd | Continue |
| 4th | ***Review Class*** |
| 5th | ***Monthly Test- 1*** |
| 6th | **Chapter No.- 4: Wireless Sensor Networks** Introduction Components of a sensor node |
| 5th | 1st | Continue |
| 2nd | Modes of Detection Challenges in WSN |
| 3rd | Sensor Web |
| 4th | Cooperation and Behavior of Nodes in WSN  Self-Management of WSN |
| 5th | Social sensing WSN |
| 6th | Application of WSN |
| 6th | 1st | Continue |
| 2nd | Wireless Multimedia sensor network  Wireless Nano sensor Networks |
| 3rd | Underwater acoustic sensor networks  WSN Coverage |
| 4th | Stationary WSN, Mobile WSN |
| 5th | ***Review Class*** |
|  | 6th | **Chapter No.- 5: M2M Communication M2M communication** M2M Ecosystem |
| 7th | 1st | M2M service Platform |
| 2nd | Continue |
| 3rd | Interoperability |
| 4th | ***Review Class*** |
| 5th | ***Monthly Test- 2*** |
| 6th | **Chapter No.- 6: Programming with Arduino** Features of Arduino |
| 8th | 1st | Components of Arduino Board |
| 2nd | Arduino IDE |
| 3rd | Case Studies |
| 4th | ***Review Class*** |
| 5th | **Chapter No.- 7: Programming with Raspberry Pi** Architecture and Pin Configuration |
| 6th | Continue |
| 9th | 1st | Case studies |
|  | 2nd | Implementation of IoT with Raspberry Pi |
|  | 3rd | Continue |
|  | 4th | ***Review Class*** |
| 5th | ***Monthly Test- 3*** |
| 6th | **Chapter No.- 8: Software defined Networking** Limitation of current network Origin of SDN |
| 10th | 1st | SDN Architecture  Rule Placement, Open flow Protocol |
| 2nd | Controller placement Security in SDN |
| 3rd | Integrating SDN in IoT |
| 4th | ***Review Class*** |
| 5th | **Chapter No.- 09(SMART HOME)**Origin and example of Smart Home Technologies |
|  | 6th | Smart Home Implementation |
| 11th | 1st | Home Area Networks (HAN) |
| 2nd | Smart Home benefits and issues |
| 3rd | Continue |
| 4th | ***Monthly Test- 4*** |
| 5th | **Chapter No.- 10: Smart Cities**  Characteristics of Smart Cities |
| 6th | Smart city Frameworks Challenges in Smart cities |
| 12th | 1st | Data Fusion Smart Parking |
| 2nd | Energy Management in Smart cities |
| 3rd | ***Review Class*** |
| 4th | **Chapter No.- 11: Industrial Iot**  IIoT requirements |
| 5th | Design considerations |
| 6th | Applications of IIoT Benefits of IIoT |
| 13th | 1st | Challenges of IIoT |
| 2nd | ***Review Class*** |
| 3rd | ***Review Class*** |
| 4th | ***Review Class*** |
| 5th | ***Review Class*** |
| 6th | ***Review Class*** |
| 14th | 1st | ***Previous Year question answer discussion*** |
| 2nd | ***Previous Year question answer discussion*** |
| 3rd | ***Previous Year question answer discussion*** |
| 4th | ***Previous Year question answer discussion*** |
| 5th | ***Previous Year question answer discussion*** |
| 6th | ***Previous Year question answer discussion*** |
| 15th | 1st | ***Previous Year question answer discussion*** |
| 2nd | ***Previous Year question answer discussion*** |
| 3rd | ***Previous Year question answer discussion*** |
| 4th | ***Previous Year question answer discussion*** |
| 5th | ***Previous Year question answer discussion*** |
|  | 6th | ***Previous Year question answer discussion*** |

*Chapters covered up to IA****: 1, 2 & 3.***