**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 networkWireless 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 ArchitectureRule 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.***