

## Workshop on IOT

### Module 1: Workshop on IOT Tools and Technologies

#### DAY 1

Time	Event	Details
9:00-9:30	Workshop Opens	Seating and settlement
9:30-9:45	Inauguration	
9:45-10:30		Speech by Keynote Speaker from industry
10:30-11:00		Speech by Keynote Speaker from industry
11:00-11:30	Tea	
11:30-1:30	Lecture 1	Lecture on Introduction to Internet of Things, IoT Architecture & Technologies, Standards and Protocols in IoT
1:30-2:30	Lunch	
2:30-3:30	Lecture 2	Lecture on MQTT Protocol: functionality with respect to secure application development
4:00-4:15	Tea	
4:15-6:00	Tutorial 1	Tutorial on Mosquitto for simulating MQTT client - broker communication for IoT devices

#### Day 2

9:30-11:00	Lecture 3	SMART sensors and Use Cases, IoT based Data Acquisition
11:00-11:15	Tea	
11:15-12:30	Lecture 4	Cloud Infrastructure for IoT
12:30-1:45		Demo of Microsoft Cloud stack for IoT
1:45-2:30	Lunch	
2:30-4:00	Tutorial 2	Building and Testing IoT device using Arduino IDE and NodeMCU
4:00-4:15	Tea	

4:15-6:00	Tutorial 2	Building and Testing IoT device using Arduino IDE and NodeMCU
<b>DAY 3</b>		
9:30-11:00	Lecture 5	Research in IoT, Installation for Tutorials
11:00-11:15	Tea	
11:15-1:45	Lecture 6	Introduction to Android in IoT, IoT based Application Development in Android, Android Things
1:45-2:30	Lunch	
2:30-4:00	Tutorial 3	Developing Android Application for IOT, Paho Android Service, MIT App Inventor, MQTTBox.
4:00-4:15	Tea	
4:15-6:00	Tutorial 3	Developing Android Application for IOT, Paho Android Service, MIT App Inventor, MQTTBox.
<b>Day 4 &amp; 5 : Project Work</b>		
<ul style="list-style-type: none"> <li>● Hands on Design Development and Testing of IoT Smart building applications.</li> <li>● Build own functional IoT prototype for Smart Building <ul style="list-style-type: none"> <li>○ Understand heterogeneity in IoT Data - variance in type/ format/ sensors / devices</li> <li>○ Real time monitoring and management of IoT devices</li> <li>○ Developing Mobile App for Smart Building Automation and control for end user application.</li> </ul> </li> </ul>		