



**GANAPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY(POLYTECHNIC)**  
Mathasahl, Jagatpur, Cuttack - 754200

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  
**LESSON PLAN**

**Session (2026-2027)**

<b>Discipline: Computer Science &amp; Engineering</b>	<b>Semester: 5<sup>th</sup>, Winter/2026</b>	<b>Name of the Faculty: Miss Smaranika Moharana. Lecturer in CSE</b>
<b>Subject: Internet of Things (Th-1)</b>	<b>No. of Days/week: 03</b>	<b>Start Date: 01.07.2026</b> <b>End Date: 05.11.2026</b>

Week	Class Day	Theory Topics
1st	1st	<b>UNIT:1 Introduction to Internet of Things(IoT)</b> -Overview of IoT- Definition and significance of IoT,
	2nd	Historical evolution and future prospects, Applications across various industries,
	3rd	IoT Architecture and Components, Basic architecture-sensors, actuators
2nd	1st	,connectivity, and data processing,
	2nd	Hardware components: microcontrollers (e.g.,Arduino,RaspberryPi),
	3rd	Software components: operating systems and middleware.
3rd	1st	<b>UNIT:2 Sensors, Actuators, and Data Acquisition: Sensors and Actuators</b>
	2nd	Types Of sensors: temperature, humidity, motion, etc
	3dr	Actuators: motors, relays, and control mechanisms,
4th	1st	Interfacing sensors and actuators with microcontrollers,
	2nd	Data Acquisition and Processing –Analog and digital data acquisition methods,
	3dr	Signal conditioning and filtering techniques,
5th	1st	Introduction to data processing and storage.
	2nd	<b>UNIT:3 Communication Protocols and Networking: IoT Communication Protocols,</b>
	3rd	Overview of protocols: MQTT, CoAP, HTTP, etc.,
6th	1st	Wireless communication: Wi-Fi, Bluetooth,
	2nd	Zigbee, Lora WAN
	3rd	Wired communication: Ethernet,

7th	1st	Ethernet, Serial communication
	2nd	Serial communication, Networking Fundamentals
	3rd	Networking Fundamentals -IP addressing and sub netting,
8th	1st	Network topologies and architectures,
	2nd	Introduction to IPv6 and its relevance to IoT.
	3rd	Revision, Question Answer Discussion
9th	1st	Quiz Test
	2nd	<b>UNIT: 4IoT Platforms and Cloud Integration:</b> IoT Platforms, Overview of popular IoT platforms
	3rd	AWS IoT, Google Cloud IoT
10th	1st	Data analytics and visualization tools, Edge computing concepts
	2nd	Quiz Test
	3rd	Cloud Computing for IoT,
11th	1st	Introduction to cloud services: IaaS, PaaS,
	2nd	SaaS, Integration of IoT devices with cloud platforms,
	3rd	Integration of IoT devices with cloud platforms,
12th	1st	Data storage, processing, and management in cloud.
	2nd	Revision, Question Answer Discussion
	3rd	Quiz Test
13th	1st	Unit Test
	2nd	<b>UNIT:5 IoT Security and Privacy:</b> Security Challenges in IoT, Common vulnerabilities and threats
	3rd	Authentication and authorization mechanisms,
14th	1st	Privacy Considerations - Data privacy laws and regulations,
	2nd	User consent and data ownership,
	3rd	Best Practices for ensuring privacy in IoT applications.
15th	1st	Revision, Question Answer Discussion
	2nd	Previous Year Question Discussion
	3rd	Previous Year Question Discussion

Sign of faculty  
S. Prakash  
22/06/26

**Sr. Lecturer**  
**Dept. of Computer Science & Eng.**  
Sign of Sr. Lect.  
S. Prakash

Sign of Principal  
S. Prakash  
22/06/26