

LESSON PLAN

JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA

Name of the Faculty: Rashmita Badhai	Academic Year: 2022-23
Course No: Th-4	Course Name: Internet of Things
Programme: Diploma	Branch: Electronics and Telecommunication Engineering
Year/ Semester: 3 rd /6th	Theory Period: 4P/Week

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1	55	1	What is IOT? Architectural Overview	Chalk & Board
2.	2	55	1	Design Principle and Needed Capabilities	Chalk & Board
3.	3	55	1	IOT Applications, Sensing, Actuation	Chalk & Board
4.	4	55	1	Basics Of Networking, M2M and IOT Technology	Chalk & Board
5.	5	55	1	Fundamentals- Devices and Gateways	Chalk & Board
6.	6	55	1	Data Management, Business processes in IOT	Chalk & Board
7.	7	55	1	Everything as a service (XaaS)	Chalk & Board
8.	8	55	1	Role of Cloud in IOT, Security aspects in IOT	Chalk & Board
9.	9	55	2	Hardware Components – Computing Arduino	Chalk & Board
10.	10	55	2	Hardware Components – Computing Raspberry Pi	Chalk & Board
11.	11	55	2	Communication	Chalk & Board
12.	12	55	2	Sensing	Chalk & Board
13.	13	55	2	Actuation	Chalk & Board
14.	14	55	2	I/O Interface	Chalk & Board
15.	15	55	2	Software Components- Programming API's	Chalk & Board
16.	16	55	2	Use of Python/Node.js/Arduino	Chalk & Board
17.	17	55	2	Protocols – MQTT, Zigbee, Bluetooth	Chalk & Board
18.	18	55	2	Protocols – CoAP, UDP, TCP	Chalk & Board
19.	19	55	3	IOT Applications	Chalk & Board
20.	20	55	3	IOT Application development	Chalk & Board
21.	21	55	3	Solution framework for IOT applications	Chalk & Board
22.	22	55	3	Solution framework for IOT applications	Chalk & Board
23.	23	55	3	Implementation of Device integration	Chalk & Board
24.	24	55	3	Data acquisition System	Chalk & Board
25.	25	55	3	Data integration system	Chalk & Board
26.	26	55	3	Device data storage	Chalk & Board
27.	27	55	3	Structured data storage	Chalk & Board

28.	28	55	3	Unstructured data storage	Chalk & Board
29.	29	55	3	Data storage on cloud	Chalk & Board
30.	30	55	3	Data storage on local server	Chalk & Board
31.	31	55	3	Authentication of devices	Chalk & Board
32.	32	55	3	Authorization of devices	Chalk & Board
33.	33	55	3	Authorization of devices	Chalk & Board
34.	34	55	4	Smart Technology	Chalk & Board
35.	35	55	4	Understanding the IOT	Chalk & Board
36.	36	55	4	Understanding the IOT Big picture	Chalk & Board
37.	37	55	4	Building the Internet of things	Chalk & Board
38.	38	55	4	Understanding smart devices	Chalk & Board
39.	39	55	4	Understanding building blocks	Chalk & Board
40.	40	55	4	Understanding network connections	Chalk & Board
41.	41	55	4	Understanding IP address	Chalk & Board
42.	42	55	4	Understanding Cellular network	Chalk & Board
43.	43	55	4	Understanding mesh network	Chalk & Board
44.	44	55	5	Smart TVs: Viewing in a connected world	Chalk & Board
45.	45	55	5	What is smart TV?	Chalk & Board
46.	46	55	5	Uses of smart TV	Chalk & Board
47.	47	55	5	What is inside smart TV?	Chalk & Board
48.	48	55	5	What a smart TV does?	Chalk & Board
49.	49	55	5	Smart TV Operating systems	Chalk & Board
50.	50	55	5	What is smart TV Set-Top Devices	Chalk & Board
51.	51	55	5	Integrating smart TV into IOT	Chalk & Board
52.	52	55	6	IOT case studies	Chalk & Board
53.	53	55	6	IOT case study: Smart Home	Chalk & Board
54.	54	55	6	IOT case study: Smart car	Chalk & Board
55.	55	55	6	IOT case study: Smart cities	Chalk & Board
56.	56	55	6	IOT case study: Smart Drones	Chalk & Board
57.	57	55	6	IOT case study: Smart Lighting	Chalk & Board
58.	58	55	6	IOT case study: Smart security system	Chalk & Board
59.	59	55	6	Industrial automation	Chalk & Board
60.	60	55	6	Industrial automation	Chalk & Board