

Internet of Things: Theory and Practice Practical

B. Sc. (Information Technology)		Semester – V	
Course Name: Internet of Things: Theory and Practice Practical		Course Code: USIT5P2	
Periods per week (1 Period is 50 minutes)		3	
Credits		2	
		Hours	Marks
Evaluation System	Practical Examination	2	50
	Internal	--	--

Practical No	Details
0	Starting Raspbian OS, Familiarizing with Raspberry Pi Components and interface, Connecting to ethernet, Monitor, USB.
1	Displaying different LED patterns with Raspberry Pi.
2	Displaying Time over 4-Digit 7-Segment Display using Raspberry Pi
3	Interfacing 16X2 LCD with Raspberry Pi to display different messages.
4	Raspberry Pi Based Oscilloscope
5	Controlling Raspberry Pi with WhatsApp.
6	Fingerprint Sensor interfacing with Raspberry Pi
7	Raspberry Pi GPS Module Interfacing
8	IoT based Web Controlled Home Automation using Raspberry Pi
9	Interfacing Pi Camera with Raspberry Pi
10	Interfacing Raspberry Pi with RFID.
11	Installing Windows 10 IoT Core on Raspberry Pi (Demo Practical)

Books and References:					
Sr. No.	Title	Author/s	Publisher	Edition	Year
1.	Designing the Internet of Things	Adrian McEwen, Hakim Cassimally	WILEY	First	2014
2.	Official Raspberry Pi Beginner's Guide	Gareth Halfacre	Raspberry Pi Press	First	2018
3.	Programming the Raspberry Pi	by Simon Monk	McGraw Hill	Third	2021
4.	Getting Started with Raspberry Pi	Matt Richardson and Shawn Wallace	SPD	Third	2016