

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE Regular and Supplementary Summer 2024 Course : B.Tech Semester : IV Branch : Artificial Intelligence and Data Science Engineering and Allied. Subject Code and Name : BTAIPE405C Internet of Things & Embedded System Max Marks : 60 Date : 24/06/2024 Duration : 3 Hrs.			
Instructions to the students: 1. All the questions are compulsory 2. The level of question /expected answer as per OBE or the course outcome (CO) on which the question is based is mentioned in () in front of the question 3. Use of non-programmable scientific calculator is allowed. 4. Assume suitable data wherever necessary and mention it clearly			
Q.1	Answer any two of the following	(CO)	Marks
A)	Define Characteristics of IOT and draw Logical design diagram and explain .	CO1	6
B)	Draw and Explain IOT three Types communication Model. What is API communication?	CO1	6
C)	Draw and Explain Communication Protocol diagram. Give the difference between IOT vs M2M	CO1,2	6
Q.2	Answer any two of the following		
A)	What is Interfacing of analog and digital sensors explain with diagram.	CO2	6
B)	Write a short note on a) C data types b) C functions c) C Branches and Loops .	CO1,2	6
C)	Draw and Explain in detail Wi-Fi Model Node MCU 8266 Hardware and Pin diagram.	CO2	6
Q.3	Answer any two of the following		
A)	Write short notes on a) Python variables b) how to write a file and read a file c) Handling exceptions.	CO3	6
B)	Draw the Raspberry Pi Model and Explain R Pi 3 hardware, GPIO Pins.	CO2	6
C)	Which are the basic Linux commands and how configuring R Pi 3.	CO4	6
Q.4	Answer any two of the following		
A)	Explain configuring NodeMCU to connecting to server.	CO4	6
B)	How publishing and subscribing data from web using R Pi 3 interfacing with Whatsapp and Twitter	CO4	6
C)	Which web services interfacing with NodeMCU?	CO4	6
Q.5	Answer any two of the following		
A)	Write note on a) UART b) Wi-Fi c) Ethernet	CO5	6
B)	Draw the diagram of OSI Model and Explain in detail Bluetooth Low Energy.	CO5	6
C)	What is difference between a) MQTT and XMPP b) DSS and AMQP	CO5	6

END