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G. VENKATASWAMY NAIDU COLLEGE (AUTONOMOUS), KOVILPATTI – 628 502.



UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2025.

(For those admitted in June 2023 and later)

PROGRAMME AND BRANCH: B.Sc., ELECTRONICS

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
V	PART - III	CORE - 10	U23EL506	INTERNET OF THINGS

Date & Session: 06.11.2025/FN

Time : 3 hours

Maximum: 75 Marks

Course Outcome	Bloom's K-level	Q. No.	SECTION – A (10 X 1 = 10 Marks) Answer <u>ALL</u> Questions.
CO1	K1	1.	Which of the Following is a common application of IoT technology? a) Automated email Systems b) Voice-activated Shopping c) Smart homes d) Text messaging
CO1	K2	2.	Which of the following is False about IoT devices ? a) IoT devices use the internet for Collecting and Sharing data b) IoT devices use the internet for collecting and Sharing data. c) IoT devices use wireless technology d) IoT devices are Completely safe
CO2	K1	3.	Which of the Following is NOT a typical Component used when interfacing an LED with an Arduino? a) Register b) LED c) Buzzer d) Jumper wires
CO2	K2	4.	What is the Operating Frequency of the Arduino UNO Board? a) 20 MHZ b) 16 MHZ c) 6 MHZ d) 10 MHZ
CO3	K1	5.	What type of Sensor provides a Continuous range of output Values typically corresponding to a varying physical quantity ? a) Digital Sensor b) Analog Sensor c) binary Sensor d) Scalar Sensor
CO3	K2	6.	Which of the following is an examples of an actuator used with Arduino ? a) DHT ii Temperature and Humidity Sensor b) Ultra sonic Sensor (HC-SR04) c) DC Motors d) photo resistor (LDR)
CO4	K1	7.	What is the typical Operating Voltage for the ESP8266 Modules ? a) 5V b) 3.3V c) 12V d) 1.8V
CO4	K2	8.	Which communication protocol is most commonly used by the ESP 8266 for connecting to a Wi-Fi network ? a) Zigbee b) Blue tooth c) Wi-Fi (IEEE802) d) NFC
CO5	K1	9.	What is the main function of an IoT gateway ? a) To Collect data from Sensors b) To Connect IoT devices to the Cloud c) To Process data at the edge d) All of the above
CO5	K2	10.	Which protocol is commonly used for Secure Communication between IoT devices and cloud platform ? a) HTTP b) FTP c) MQTT d) HTTPS

Course Outcome	Bloom's K-level	Q. No.	SECTION – B (5 X 5 = 25 Marks) Answer <u>ALL</u> Questions choosing either (a) or (b)
CO1	K3	11a.	Discuss about the various platform for IoT. (OR)
CO1	K3	11b.	Explain the real time system in IoT.
CO2	K3	12a.	How do you connect an LED to an Arduino for basic on/off Control? (OR)
CO2	K3	12b.	Write short notes on setup the IDE.
CO3	K4	13a.	What are the main difference between an analog and a digital Sensors? (OR)
CO3	K4	13b.	Explain the basic components involved in interfacing a relay and Servo motor with an Arduino.
CO4	K4	14a.	What is the ESP 8266? (OR)
CO4	K4	14b.	What are the Key metrics to monitor for a webserver application?
CO5	K5	15a.	How does virtualization relate to cloud computing? (OR)
CO5	K5	15b.	What are the benefits of virtualization in cloud computing?

Course Outcome	Bloom's K-level	Q. No.	SECTION – C (5 X 8 = 40 Marks) Answer <u>ALL</u> Questions choosing either (a) or (b)
CO1	K3	16a.	What are the different types of IoT Communication models? (OR)
CO1	K3	16b.	What are the main components the IoT architecture?
CO2	K4	17a.	How to interface 12C LCD display with Arduino? (OR)
CO2	K4	17b.	Describe the basic Circuit Connection for a push button and a buzzer with an Arduino.
CO3	K4	18a.	Hoe are gas Sensors Connected to Arduino? (OR)
CO3	K4	18b.	What are the basic steps involved in interfacing a temperature sensor with Arduino?
CO4	K5	19a.	What is a web Server application in the context of home automation and smart irrigation? (OR)
CO4	K5	19b.	What is Wi-Fi ,what security protocols are used in Wi-Fi?
CO5	K5	20a.	What are the main components of Blynk. Write some common applications? (OR)
CO5	K5	20b.	How does the ESP8266 act as a web server and some common uses for an ESP8266 Web Server.