Reg. No. | | | | | | | | |

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

UG DEGREE END SEMESTER EXAMINATIONS - NOVEMBER 2024.

(For those admitted in June 2021 and later)

PROGRAMME AND BRANCH: B.Sc., ELECTRONICS

SEM	CATEGORY	COMPONENT	COURSE CODE	COURSE TITLE
V	PART-III	CORE	U21EL507	INTERNET OF THINGS

Date & Session: 08.11.2024 / FN **Time: 3 hours** **Maximum: 75 Marks**

Course Outcome	Bloom's K-level	Q. No.	**SECTION – A (10 X 1 = 10 Marks)** **Answer ALL Questions.**
CO1	K1	1.	Select the layer is used for wireless connection in IoT devices. a) Application layer b) Network layer c) Data link layer d) Transport layer
CO1	K2	2.	IoT gateway must provide _____. a) Protocol abstraction b) Data storage c) Security with hardware d) Simple and fast installation
CO2	K1	3.	Identify which library is used to access I2C in Arduino IoT devices? a) EEPROM b) Wire c) DHT11 d) ArduinoJson
CO2	K2	4.	Select which of the following is not related to Arduino IDE IoT software? a) Serial monitor b) Verify c) Upload d) Terminate
CO3	K1	5.	Show another name of the tactile sensor. a) weight sensor b) imaging sensor c) Proximity sensor d) touch sensor
CO3	K2	6.	Illustrate which of the following devices is used to measure the gases or liquid? a) optical sensor b) gas sensor c) smoke sensor d) pressure sensor
CO4	K1	7.	What is the use of the ESP8266 WiFi Module? a) monitors motion b) evaluates air pressure c) network provider d) switches circuits
CO4	K2	8.	How many pins are present in the ESP8266 WiFi Module? a) 12 b) 10 c) 8 d) 50
CO5	K1	9.	Show the signals are there in the SPI protocol? a) five signals b) six signals c) nine signals d) zero signals
CO5	K2	10.	Select the M2M communication protocol. a) I^2C b) SPI c) IEEE 802.11 d) MQTT

Course Outcome	Bloom's K-level	Q. No.	**SECTION – B (5 X 5 = 25 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	11a.	Illustrate the real time examples of IoT. **(OR)**
CO1	K3	11b.	State definition and characteristics of IoT.
CO2	K3	12a.	Describe Arduino library. **(OR)**
CO2	K3	12b.	Enumerate the basics of embedded C program for Arduino.
CO3	K4	13a.	Describe the working of IC temperature sensor. **(OR)**
CO3	K4	13b.	Demonstrate the interfacing of relay switch with Arduino.
CO4	K4	14a.	Explain the basics of wireless networking. **(OR)**
CO4	K4	14b.	Enumerate the features of ESP8266 wifi module.
CO5	K5	15a.	Compare M2M with IoT. **(OR)**
CO5	K5	15b.	Discuss blynk app for I/O Operations.

Course Outcome	Bloom's K-level	Q. No.	**SECTION – C (5 X 8 = 40 Marks)** **Answer ALL Questions choosing either (a) or (b)**
CO1	K3	16a.	Sketch the architecture of IoT and explain its protocol in detail. **(OR)**
CO1	K3	16b.	Enumerate the IoT communication technologies.
CO2	K4	17a.	Sketch the Arduino uno architecture and explain its arduino IDE environment. **(OR)**
CO2	K4	17b.	Demonstrate the interfacing Arduino with LCD and neat Sketch.
CO3	K4	18a.	Differentiate analog and digital sensors. **(OR)**
CO3	K4	18b.	Explain the interfacing of light and gas sensor with Arduino.
CO4	K5	19a.	Illustrate the features and applications of NodeMCU. **(OR)**
CO4	K5	19b.	Explain the various wi-fi library and web server.
CO5	K5	20a.	Discuss the visualization concept and cloud architecture with neat diagram. **(OR)**
CO5	K5	20b.	Describe the interfacing of esp8266 with web services.