



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai
Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &
Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)
COIMBATORE-641 035, TAMIL NADU



Reg. No:

B.E/B.Tech- Internal Assessment – III
Academic Year 2024-2025 (EVEN Semester)
Sixth Semester

Electrical and Electronics Engineering
19EEB303 – MICROCONTROLLER AND ITS APPLICATIONS

Time: 1^{1/2} Hours

Maximum Marks: 50

Answer All Questions

		CO	Blooms
1.	Describe the bus architecture used in ARM processors and how it affects load/store efficiency in motor control systems.(GATE EC 2024)	CO4	UND
2.	Recall the term Arduino and mention the importance.	CO4	UND
3.	Define Micro C.	CO4	UND
4.	State two critical safety applications of Arduino in smart prosthetics. (GATE IN 2023)	CO5	UND
5.	Identify the use of Arduino Uno for a portable ECG signal preprocessing unit in a telemedicine kit. (GATE IN 2022)	CO5	APP

PART – B (2*13=26 Marks) & (1*14=14 Marks)

		CO	Blooms
6.	(a) Analyze how ARM's memory management unit (MMU) plays a key role in building an embedded system for MRI imaging data logging. GATE EC 2022)	13 CO4	ANA
	(OR)		
	(b) Interpret the addressing modes of ARM with example.	13 CO4	UND
7.	(a) Explain about Arduino hardware with necessary diagram.	13 CO5	UND
	(OR)		
	(b) Design a fallback system using Arduino to manually override voltage control when ARM fails, and justify its response capability.(GATE IoT Scenario 2024).	13 CO5	APP
8.	(a) Analyze how an ARM processor can be programmed to detect phase faults in a transmission line using digital I/O interrupts.(GATE EE Embedded 2023).	14 CO4	ANA
	(OR)		
	(b) Analyze one application related healthcare using Arduino with neat sketch.	14 CO5	APP

Bloom's Taxonomy:

REM – Remember **UND** – Understand **APP**– Apply **ANA**– Analyze **EVA** - Evaluate **CRT** - Create